VERITAS

2019年HLAワークショップ

HLA Fusion4.3 MatchMakerマニュアル

株式会社ベリタス

2019年4月20日

MatchMakerとは

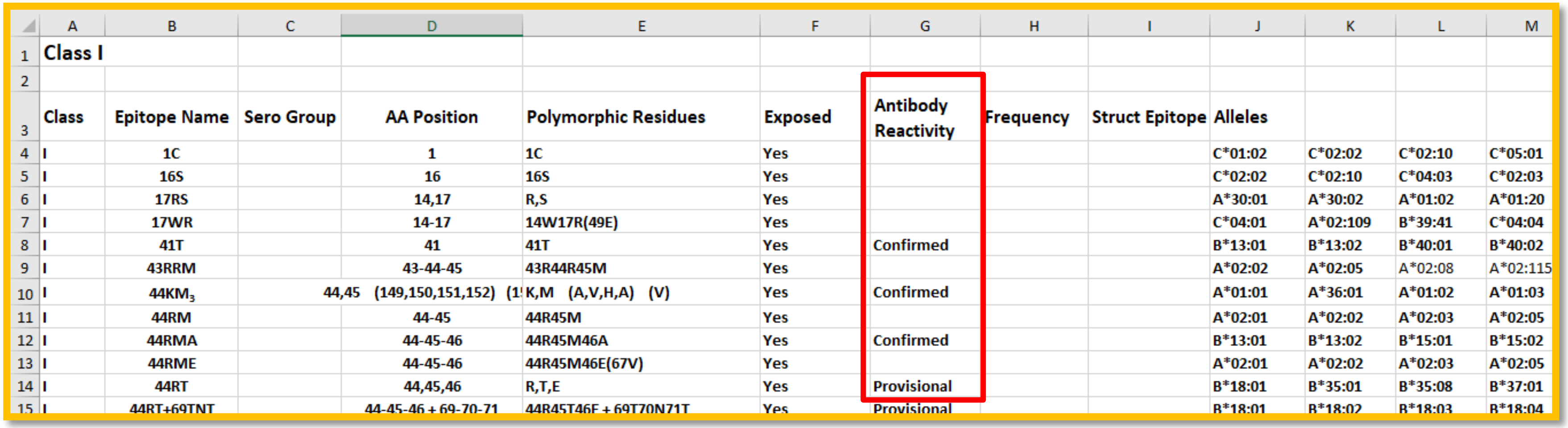
- Duquesnoyが作成したフリーソフト
  - 下記リンクよりダウンロード可能
    http://www.epitopes.net/index.html
- HLA Fusion MatchMakerでは2つの解析が可能
  - Epitope Matching

    PatientとDonorのタイピング結果を入力することMismatchの数を表示
  - Epitope Analysis

    LABScreen Single Antigenデータをもとにエピトープ解析
- エピトープ解析を行うためには、ドナー、レシピエント共に4桁のタイピング情報が必要

データベースの設定

解析用ファイルとは

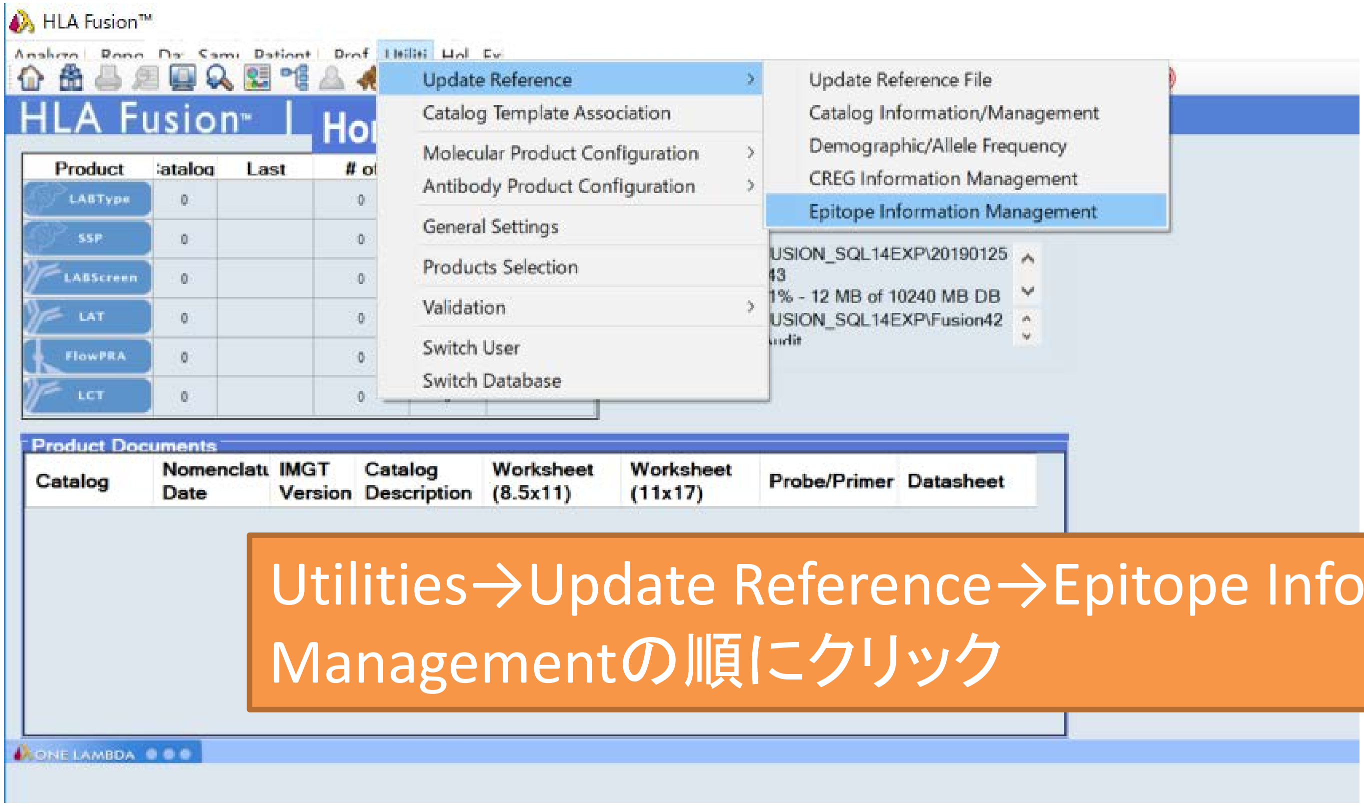


	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Class I												
2													
3	Class	Epitope Name	Sero Group	AA Position	Polymorphic Residues	Exposed	Antibody Reactivity	Frequency	Struct Epitope	Alleles			
4	I	1C		1	1C	Yes				C*01:02	C*02:02	C*02:10	C*05:01
5	I	16S		16	16S	Yes				C*02:02	C*02:10	C*04:03	C*02:03
6	I	17RS		14,17	R,S	Yes				A*30:01	A*30:02	A*01:02	A*01:20
7	I	17WR		14-17	14W17R(49E)	Yes				C*04:01	A*02:109	B*39:41	C*04:04
8	I	41T		41	41T	Yes	Confirmed			B*13:01	B*13:02	B*40:01	B*40:02
9	I	43RRM		43-44-45	43R44R45M	Yes				A*02:02	A*02:05	A*02:08	A*02:115
10	I	44KM$_3$		44,45 (149,150,151,152) (1	K,M (A,V,H,A) (V)	Yes	Confirmed			A*01:01	A*36:01	A*01:02	A*01:03
11	I	44RM		44-45	44R45M	Yes				A*02:01	A*02:02	A*02:03	A*02:05
12	I	44RMA		44-45-46	44R45M46A	Yes	Confirmed			B*13:01	B*13:02	B*15:01	B*15:02
13	I	44RME		44-45-46	44R45M46E(67V)	Yes				A*02:01	A*02:02	A*02:03	A*02:05
14	I	44RT		44,45,46	R,T,E	Yes	Provisional			B*18:01	B*35:01	B*35:08	B*37:01
15	I	44RT+69TNT		44-45-46 + 69-70-71	44R45T46E + 69T70N71T	Yes	Provisional			B*18:01	B*18:02	B*18:03	B*18:04

- Duquesnoyのデータベースを参照にOne Lambdaが作成したエピトープ情報
  - Confirmed : 実験で証明されている
  - Provisional : 理論的に存在が予測されるが実験では証明されていない
  - Blank : unknown

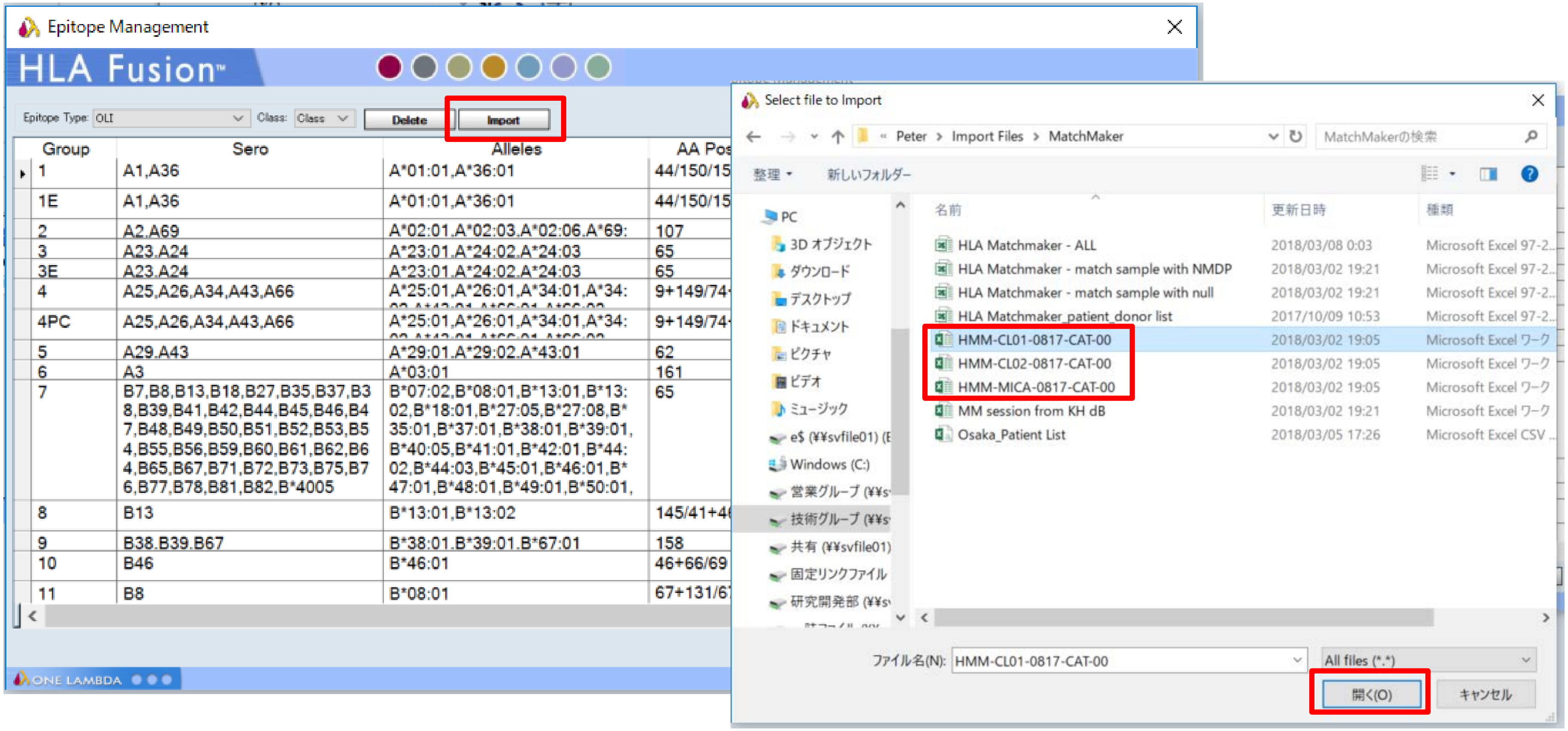
解析用ファイルのインポート-1

解析用ファイル（Excelファイル）はClass1,Class2,MICAの３種類があります。


HLA Fusion™
Update Reference
Catalog Template Association
Molecular Product Configuration
Antibody Product Configuration
General Settings
Products Selection
Validation
Switch User
Switch Database
Update Reference File
Catalog Information/Management
Demographic/Allele Frequency
CREG Information Management
Epitope Information Management
HLA Fusion
Product
Last
LABType
SSP
LABScreen
LAT
FlowPRA
LCT
Product Documents
Catalog
Nomenclatu Date
IMGT Version
Catalog Description
Worksheet (8.5x11)
Worksheet (11x17)
Probe/Primer
Datasheet
ONE LAMBDA

Utilities→Update Reference→Epitope Information Managementの順にクリック

解析用ファイルのインポート-2


Epitope Management
HLA Fusion™
Epitope Type: OLI
Class: Class
Delete
Import
ONE LAMBDA
Select file to Import
Peter > Import Files > MatchMaker
MatchMakerの検索
整理
新しいフォルダー
PC
3D オブジェクト
ダウンロード
デスクトップ
ドキュメント
ピクチャ
ビデオ
ミュージック
e$ (¥¥svfile01) (E
Windows (C:)
営業グループ (¥¥s
技術グループ (¥¥s
共有 (¥¥svfile01)
固定リンクファイル
研究開発部 (¥¥s
All files (*.*)
開く(O)
キャンセル

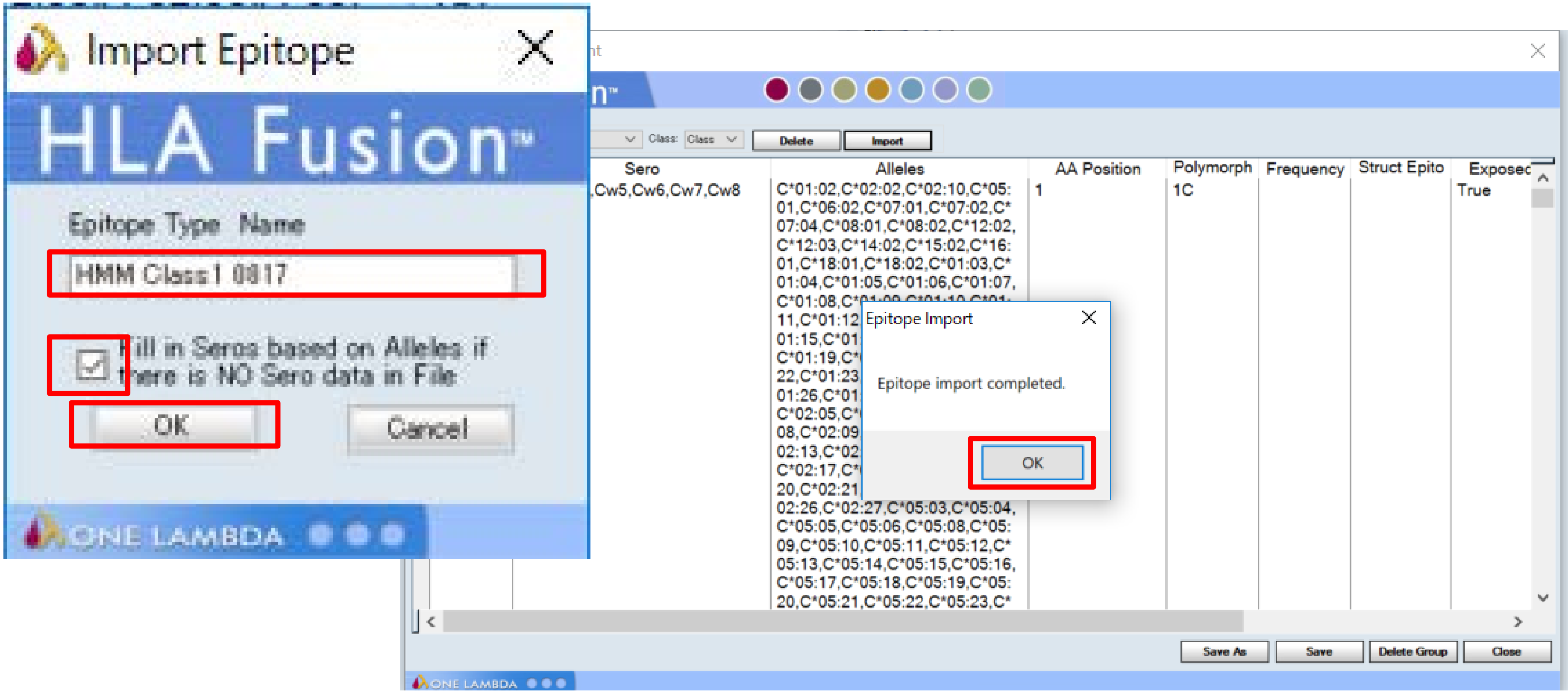
Group	Sero	Alleles	AA Pos
1	A1,A36	A*01:01,A*36:01	44/150/15
1E	A1,A36	A*01:01,A*36:01	44/150/15
2	A2,A69	A*02:01,A*02:03,A*02:06,A*69:	107
3	A23,A24	A*23:01,A*24:02,A*24:03	65
3E	A23,A24	A*23:01,A*24:02,A*24:03	65
4	A25,A26,A34,A43,A66	A*25:01,A*26:01,A*34:01,A*34:	9+149/74
4PC	A25,A26,A34,A43,A66	A*25:01,A*26:01,A*34:01,A*34:	9+149/74
5	A29,A43	A*29:01,A*29:02,A*43:01	62
6	A3	A*03:01	161
7	B7,B8,B13,B18,B27,B35,B37,B38,B39,B41,B42,B44,B45,B46,B47,B48,B49,B50,B51,B52,B53,B54,B55,B56,B59,B60,B61,B62,B64,B65,B67,B71,B72,B73,B75,B76,B77,B78,B81,B82,B*4005	B*07:02,B*08:01,B*13:01,B*13:02,B*18:01,B*27:05,B*27:08,B*35:01,B*37:01,B*38:01,B*39:01,B*40:05,B*41:01,B*42:01,B*44:02,B*44:03,B*45:01,B*46:01,B*47:01,B*48:01,B*49:01,B*50:01,	65
8	B13	B*13:01,B*13:02	145/41+4
9	B38,B39,B67	B*38:01,B*39:01,B*67:01	158
10	B46	B*46:01	46+66/69
11	B8	B*08:01	67+131/6

名前	更新日時	種類
HLA Matchmaker - ALL	2018/03/08 0:03	Microsoft Excel 97-2...
HLA Matchmaker - match sample with NMDP	2018/03/02 19:21	Microsoft Excel 97-2...
HLA Matchmaker - match sample with null	2018/03/02 19:21	Microsoft Excel 97-2...
HLA Matchmaker_patient_donor list	2017/10/09 10:53	Microsoft Excel 97-2...
HMM-CL01-0817-CAT-00	2018/03/02 19:05	Microsoft Excel ワーク
HMM-CL02-0817-CAT-00	2018/03/02 19:05	Microsoft Excel ワーク
HMM-MICA-0817-CAT-00	2018/03/02 19:05	Microsoft Excel ワーク
MM session from KH dB	2018/03/02 19:21	Microsoft Excel ワーク
Osaka_Patient List	2018/03/05 17:26	Microsoft Excel CSV ...

ファイル名(N): HMM-CL01-0817-CAT-00

Importをクリックし、ファイルを選択→開くをクリック
１度にインポートできるファイルは1つのみです。

解析用ファイルのインポート-3


Import Epitope
HLA Fusion™
OK
Cancel
ONE LAMBDA
Class:
Delete
Import
Save As
Save
Delete Group
Close
OK

Epitope Type Name: HMM Class1 0817

☑ Fill in Seros based on Alleles if there is NO Sero data in File

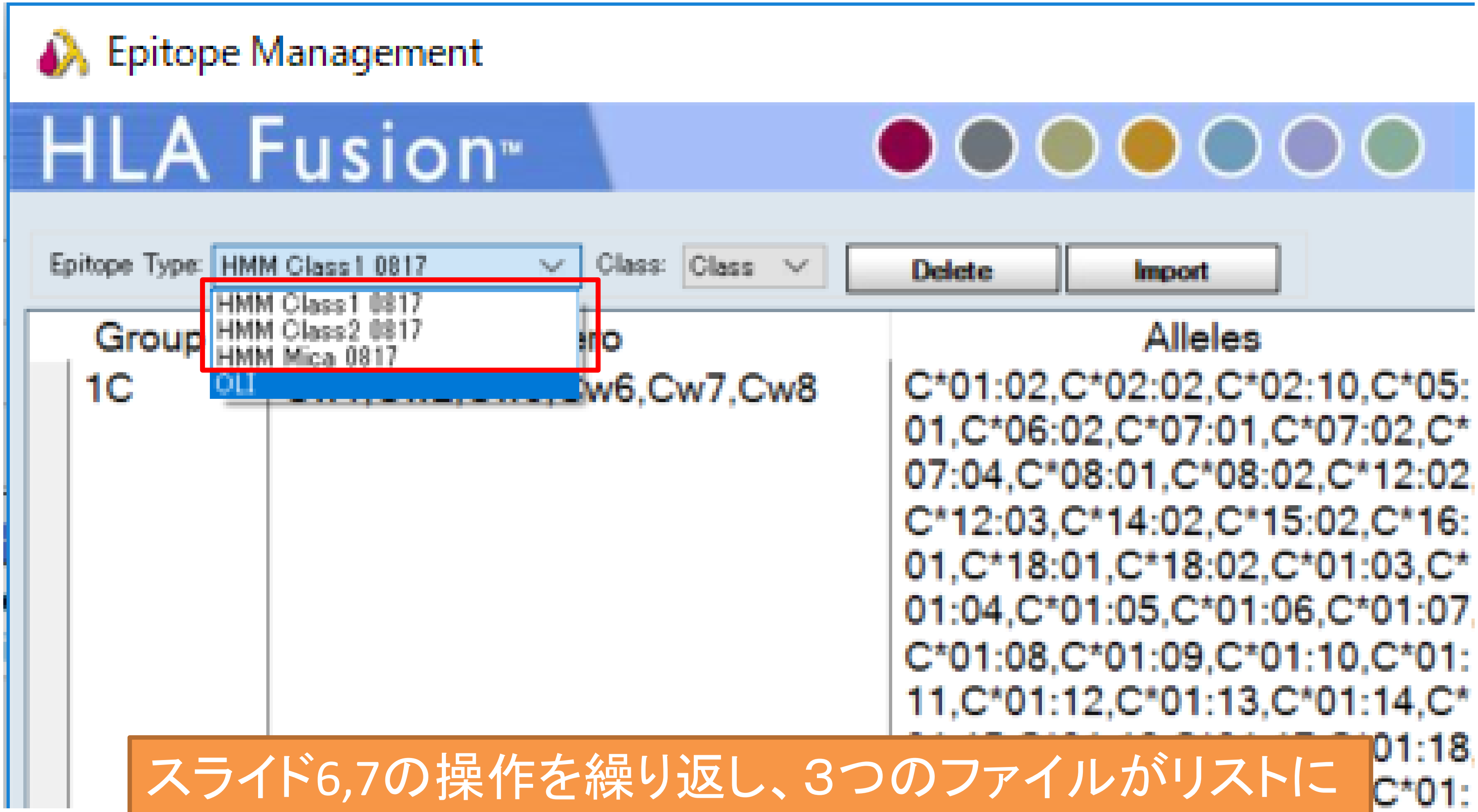
Sero	Alleles	AA Position	Polymorph	Frequency	Struct Epito	Exposed
,Cw5,Cw6,Cw7,Cw8	C*01:02,C*02:02,C*02:10,C*05:01,C*06:02,C*07:01,C*07:02,C*07:04,C*08:01,C*08:02,C*12:02,C*12:03,C*14:02,C*15:02,C*16:01,C*18:01,C*18:02,C*01:03,C*01:04,C*01:05,C*01:06,C*01:07, 02:26,C*02:27,C*05:03,C*05:04,C*05:05,C*05:06,C*05:08,C*05:09,C*05:10,C*05:11,C*05:12,C*05:13,C*05:14,C*05:15,C*05:16,C*05:17,C*05:18,C*05:19,C*05:20,C*05:21,C*05:22,C*05:23,C*	1	1C			True

Epitope Import

Epitope import completed.

Epitope Type Nameを入力し、□にチェックを入れ、OKをクリック
Epitope Type Nameはcsvファイル名と同じで構いません。
インポート終了画面が表示されますのでOKをクリック

解析用ファイルのインポート-4



Epitope Management

HLA Fusion™

Epitope Type: HMM Class1 0817

Class: Class

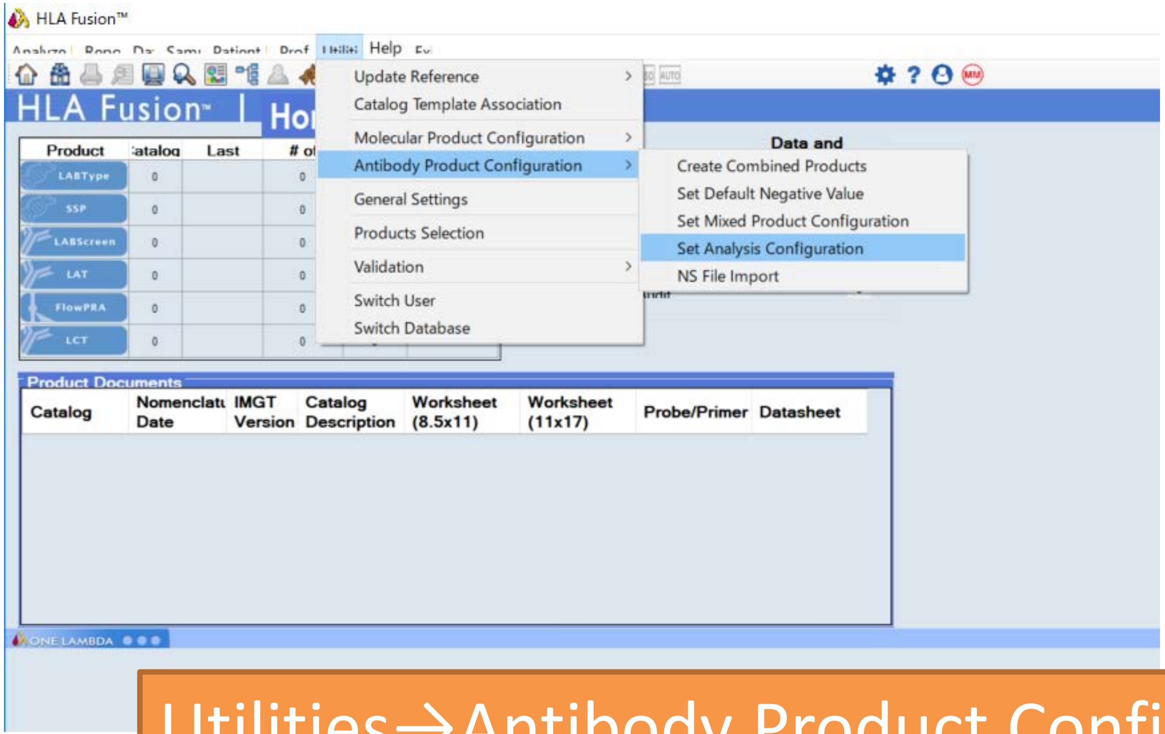
HMM Class1 0817
HMM Class2 0817
HMM Mica 0817
OLI

Group	ero	Alleles
1C	w6,Cw7,Cw8	C*01:02,C*02:02,C*02:10,C*05:01,C*06:02,C*07:01,C*07:02,C*07:04,C*08:01,C*08:02,C*12:02,C*12:03,C*14:02,C*15:02,C*16:01,C*18:01,C*18:02,C*01:03,C*01:04,C*01:05,C*01:06,C*01:07,C*01:08,C*01:09,C*01:10,C*01:11,C*01:12,C*01:13,C*01:14,C*01:18,C*01:

スライド6,7の操作を繰り返し、3つのファイルがリストに表示されることを確認し、インポート完了です。

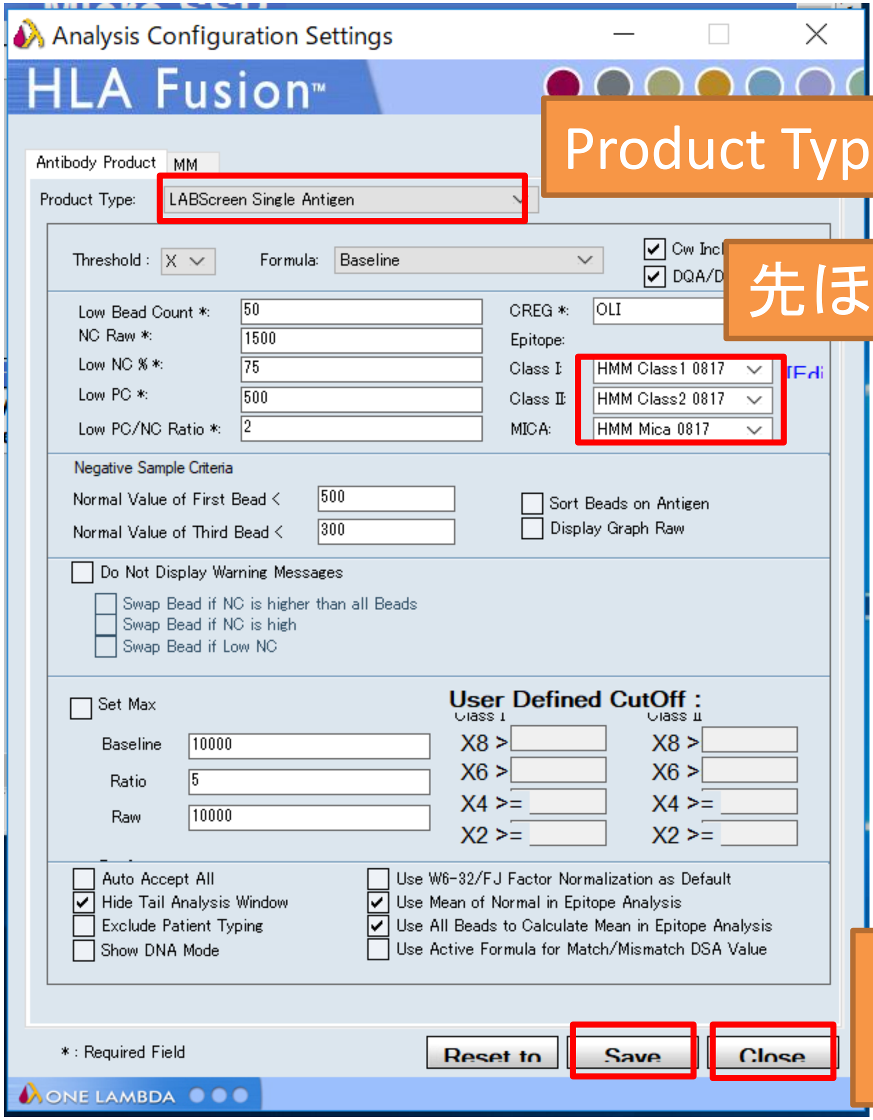
解析の設定-1

インポートした情報をLABScreen Single Antigenの解析の際に使用するための設定をします。


HLA Fusion™
Help
HLA Fusion
Update Reference
Catalog Template Association
Molecular Product Configuration
Antibody Product Configuration
General Settings
Products Selection
Validation
Switch User
Switch Database
Create Combined Products
Set Default Negative Value
Set Mixed Product Configuration
Set Analysis Configuration
NS File Import
Product
Last
LABType
SSP
LABScreen
LAT
FlowPRA
LCT
Product Documents
Catalog
Nomenclatu Date
IMGT Version
Catalog Description
Worksheet (8.5x11)
Worksheet (11x17)
Probe/Primer
Datasheet
ONE LAMBDA

Utilities→Antibody Product Configuration→Set Analysis Configurationの順にクリック

解析の設定-2



Product Type: LABScreen Single Antigen

Threshold : X
Formula: Baseline
☑ Cw Incl
☑ DQA/D

Low Bead Count *: 50
NC Raw *: 1500
Low NC % *: 75
Low PC *: 500
Low PC/NC Ratio *: 2

CREG *: OLI
Epitope:
Class I: HMM Class1 0817
Class II: HMM Class2 0817
MICA: HMM Mica 0817

Negative Sample Criteria
Normal Value of First Bead < 500
Normal Value of Third Bead < 300
☐ Sort Beads on Antigen
☐ Display Graph Raw

☐ Do Not Display Warning Messages
☐ Swap Bead if NC is higher than all Beads
☐ Swap Bead if NC is high
☐ Swap Bead if Low NC

☐ Set Max
Baseline 10000
Ratio 5
Raw 10000

User Defined CutOff :

Class I		Class II	
X8 >		X8 >	
X6 >		X6 >	
X4 >=		X4 >=	
X2 >=		X2 >=	

☐ Auto Accept All
☑ Hide Tail Analysis Window
☐ Exclude Patient Typing
☐ Show DNA Mode
☐ Use W6-32/FJ Factor Normalization as Default
☑ Use Mean of Normal in Epitope Analysis
☑ Use All Beads to Calculate Mean in Epitope Analysis
☐ Use Active Formula for Match/Mismatch DSA Value

* : Required Field

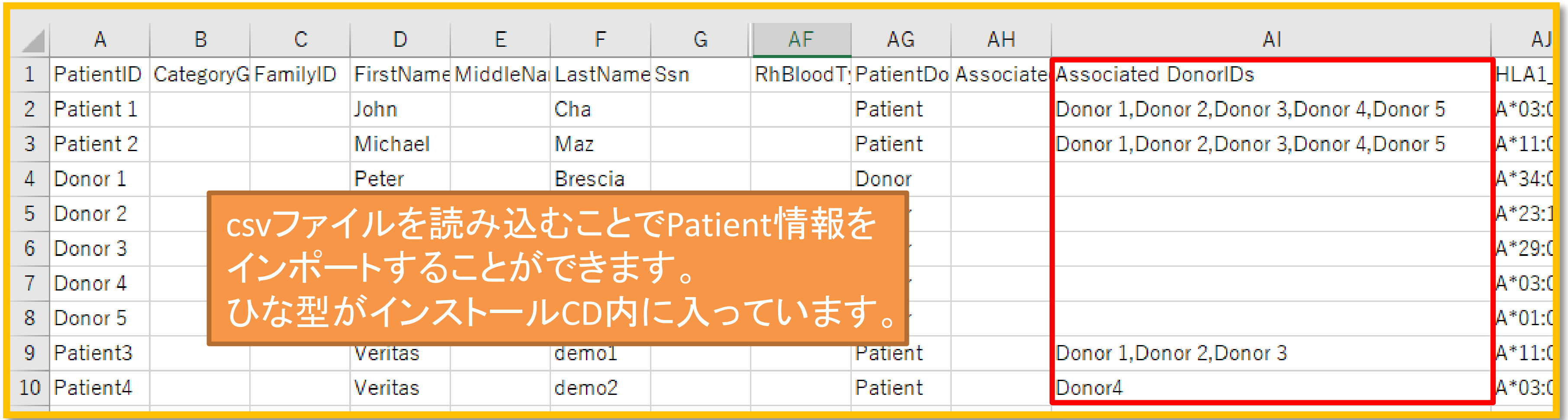
Product Type : LABScreen Single Antigenを選択

先ほどインポートしたファイルを選択

解析用ファイルの更新時は必ずスライドP5~10の操作を行い、最新の情報を使用して解析を行ってください。
更新情報は弊社のweb及びメールニュースにてご案内致します。

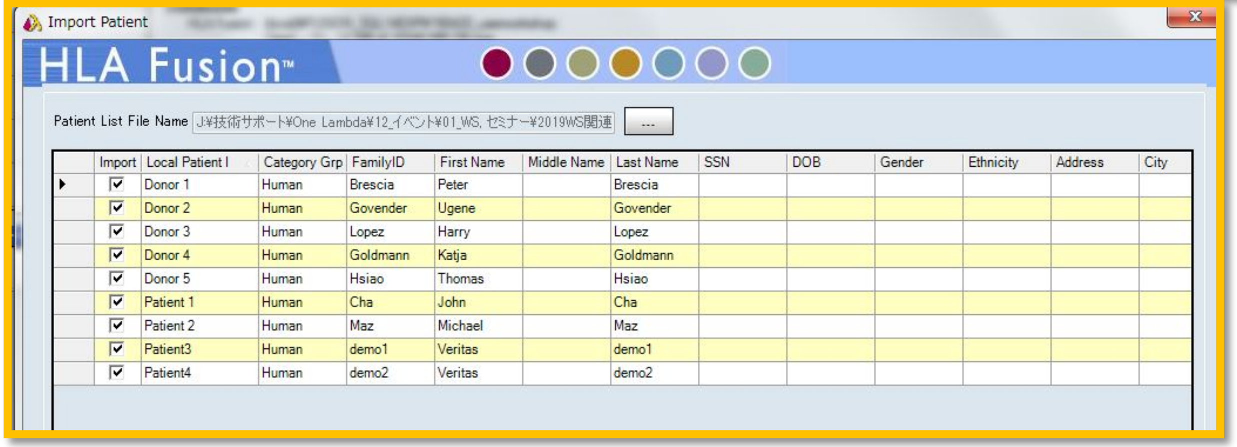
Save→Closeの順にクリックして終了です。

(参考) Patient情報インポート用ファイル



	A	B	C	D	E	F	G	AF	AG	AH	AI	AJ
1	PatientID	CategoryG	FamilyID	FirstName	MiddleNa	LastName	Ssn	RhBloodT	PatientDo	Associate	Associated DonorIDs	HLA1_
2	Patient 1			John		Cha			Patient		Donor 1,Donor 2,Donor 3,Donor 4,Donor 5	A*03:0
3	Patient 2			Michael		Maz			Patient		Donor 1,Donor 2,Donor 3,Donor 4,Donor 5	A*11:0
4	Donor 1			Peter		Brescia			Donor			A*34:0
5	Donor 2											A*23:1
6	Donor 3											A*29:0
7	Donor 4											A*03:0
8	Donor 5											A*01:0
9	Patient3			Veritas		demo1			Patient		Donor 1,Donor 2,Donor 3	A*11:0
10	Patient4			Veritas		demo2			Patient		Donor4	A*03:0

csvファイルを読み込むことでPatient情報を
インポートすることができます。
ひな型がインストールCD内に入っています。



Patient List File Name: J:¥技術サポート¥One Lambda¥12_イベント¥01_WS, セミナー¥2019WS関連

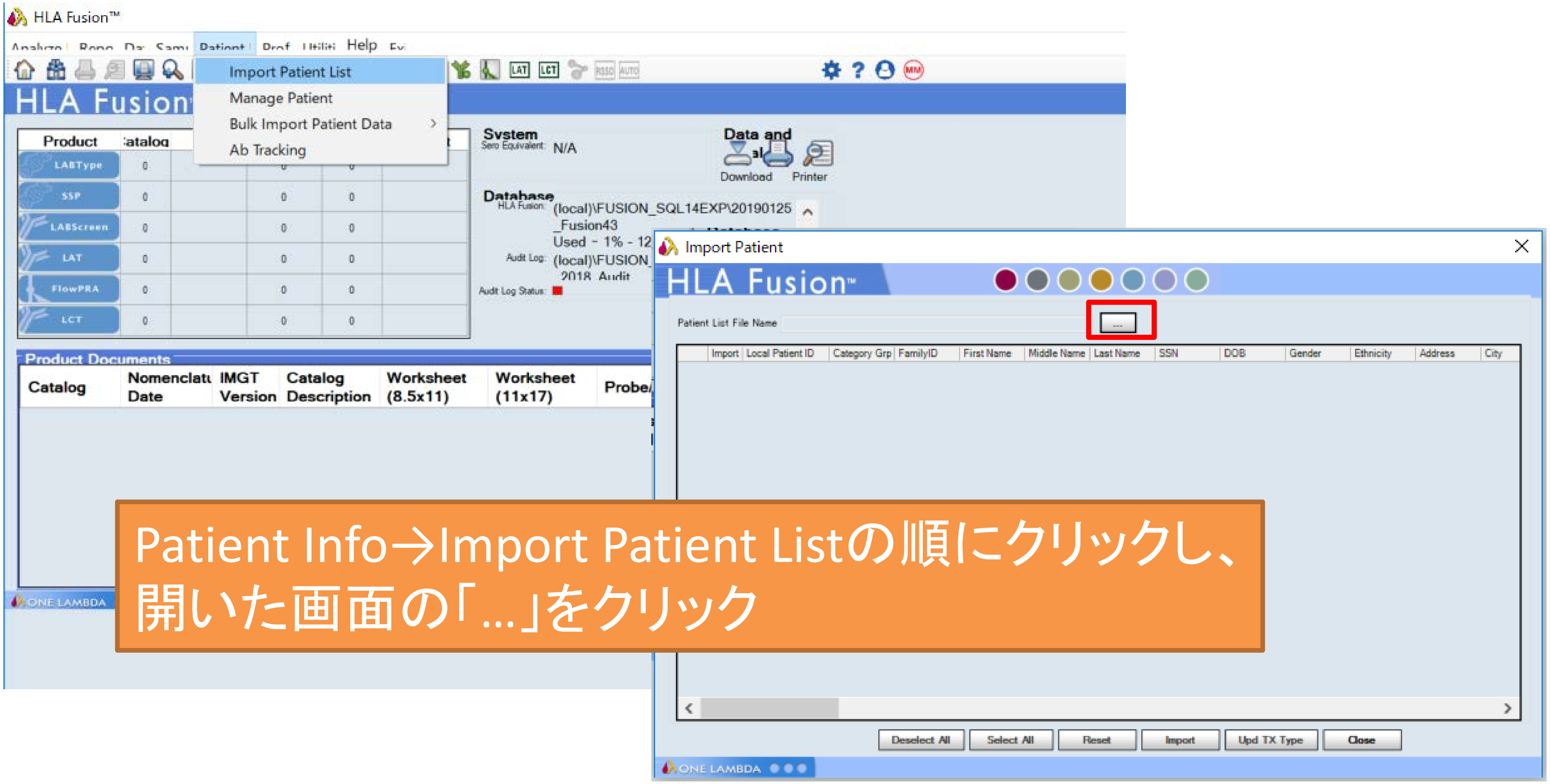
Import	Local Patient I	Category Grp	FamilyID	First Name	Middle Name	Last Name	SSN	DOB	Gender	Ethnicity	Address	City
☑	Donor 1	Human	Brescia	Peter		Brescia						
☑	Donor 2	Human	Govender	Ugene		Govender						
☑	Donor 3	Human	Lopez	Harry		Lopez						
☑	Donor 4	Human	Goldmann	Katja		Goldmann						
☑	Donor 5	Human	Hsiao	Thomas		Hsiao						
☑	Patient 1	Human	Cha	John		Cha						
☑	Patient 2	Human	Maz	Michael		Maz						
☑	Patient3	Human	demo1	Veritas		demo1						
☑	Patient4	Human	demo2	Veritas		demo2						

HLA Fusionにインポート
した画面

日本語不可です。半角英数字を使用してください。

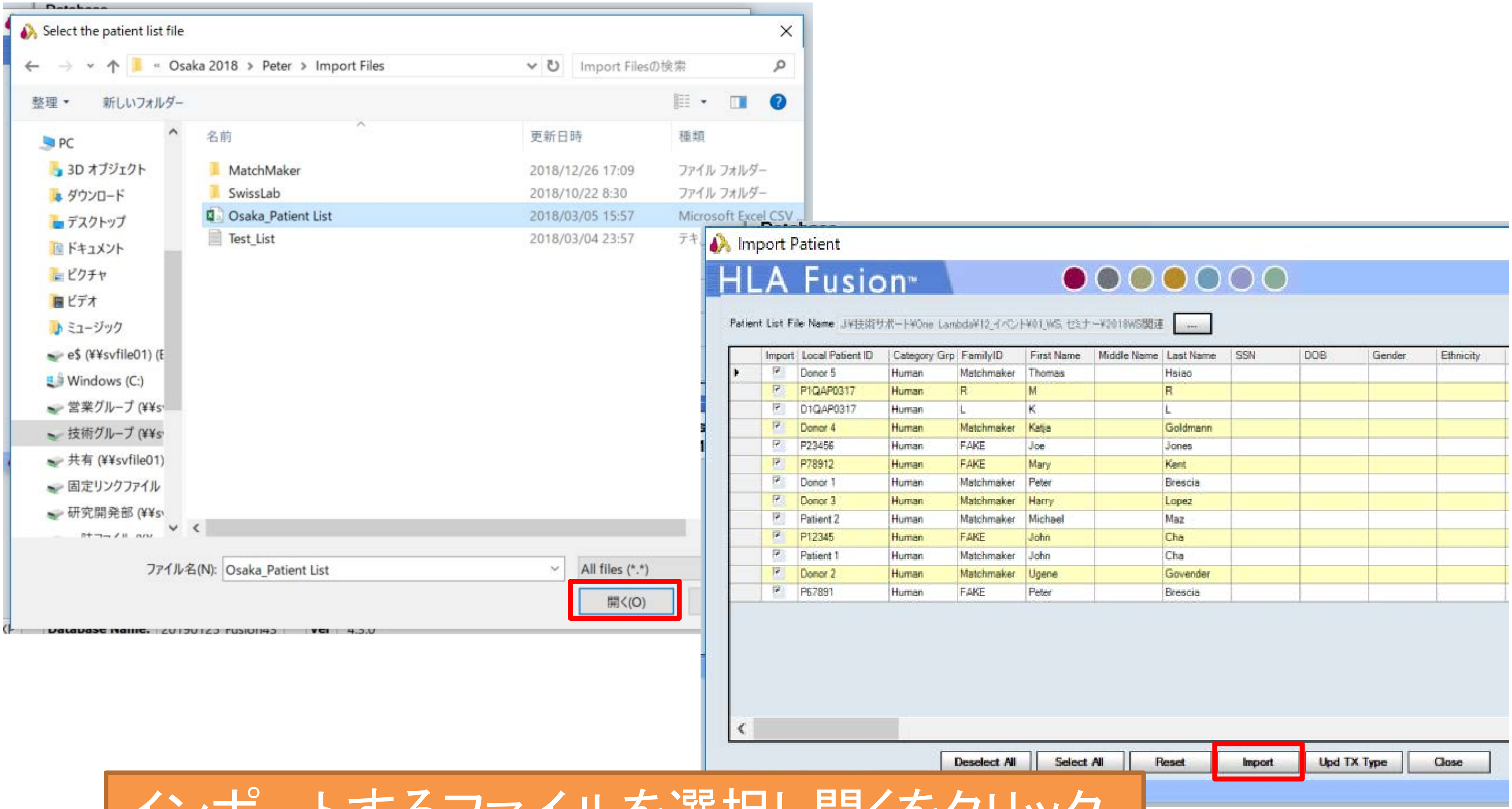
AI列にDonor IDを入力することでPatient情報とDonor情報の紐づけができます。

(参考)Patient情報のインポート-1


HLA Fusion™
Analyze
Repo
Da
Samp
Patient
Prof
Utiliti
Help
Ex
Import Patient List
Manage Patient
Bulk Import Patient Data
Ab Tracking
HLA Fusion
Product
Catalog
LABType
SSP
LABScreen
LAT
FlowPRA
LCT
System
Sero Equivalent: N/A
Data and
Download
Printer
Database
HLA Fusion: (local)\FUSION_SQL14EXP\20190125_Fusion43
Used - 1% - 12
Audit Log: (local)\FUSION_2018_Audit
Audit Log Status:
Product Documents
Catalog
Nomenclature Date
IMGT Version
Catalog Description
Worksheet (8.5x11)
Worksheet (11x17)
Probe
ONE LAMBDA
Import Patient
HLA Fusion™
Patient List File Name
...
Import
Local Patient ID
Category Grp
FamilyID
First Name
Middle Name
Last Name
SSN
DOB
Gender
Ethnicity
Address
City
Deselect All
Select All
Reset
Import
Upd TX Type
Close
ONE LAMBDA

Patient Info→Import Patient Listの順にクリックし、開いた画面の「...」をクリック

(参考)Patient情報のインポート-2


Select the patient list file
Osaka 2018 > Peter > Import Files
Import Filesの検索
整理
新しいフォルダー
PC
3D オブジェクト
ダウンロード
デスクトップ
ドキュメント
ピクチャ
ビデオ
ミュージック
e$ (¥¥svfile01) (E
Windows (C:)
営業グループ (¥¥s
技術グループ (¥¥s
共有 (¥¥svfile01)
固定リンクファイル
研究開発部 (¥¥s
名前
更新日時
種類
All files (*.*)
開く(O)
Import Patient
HLA Fusion™
...
Deselect All
Select All
Reset
Import
Upd TX Type
Close

名前	更新日時	種類
MatchMaker	2018/12/26 17:09	ファイル フォルダー
SwissLab	2018/10/22 8:30	ファイル フォルダー
Osaka_Patient List	2018/03/05 15:57	Microsoft Excel CSV
Test_List	2018/03/04 23:57	テキ

ファイル名(N): Osaka_Patient List

Patient List File Name J:¥技術サポート¥One Lambda¥12_イベント¥01_WS, セミナー¥2018WS関連

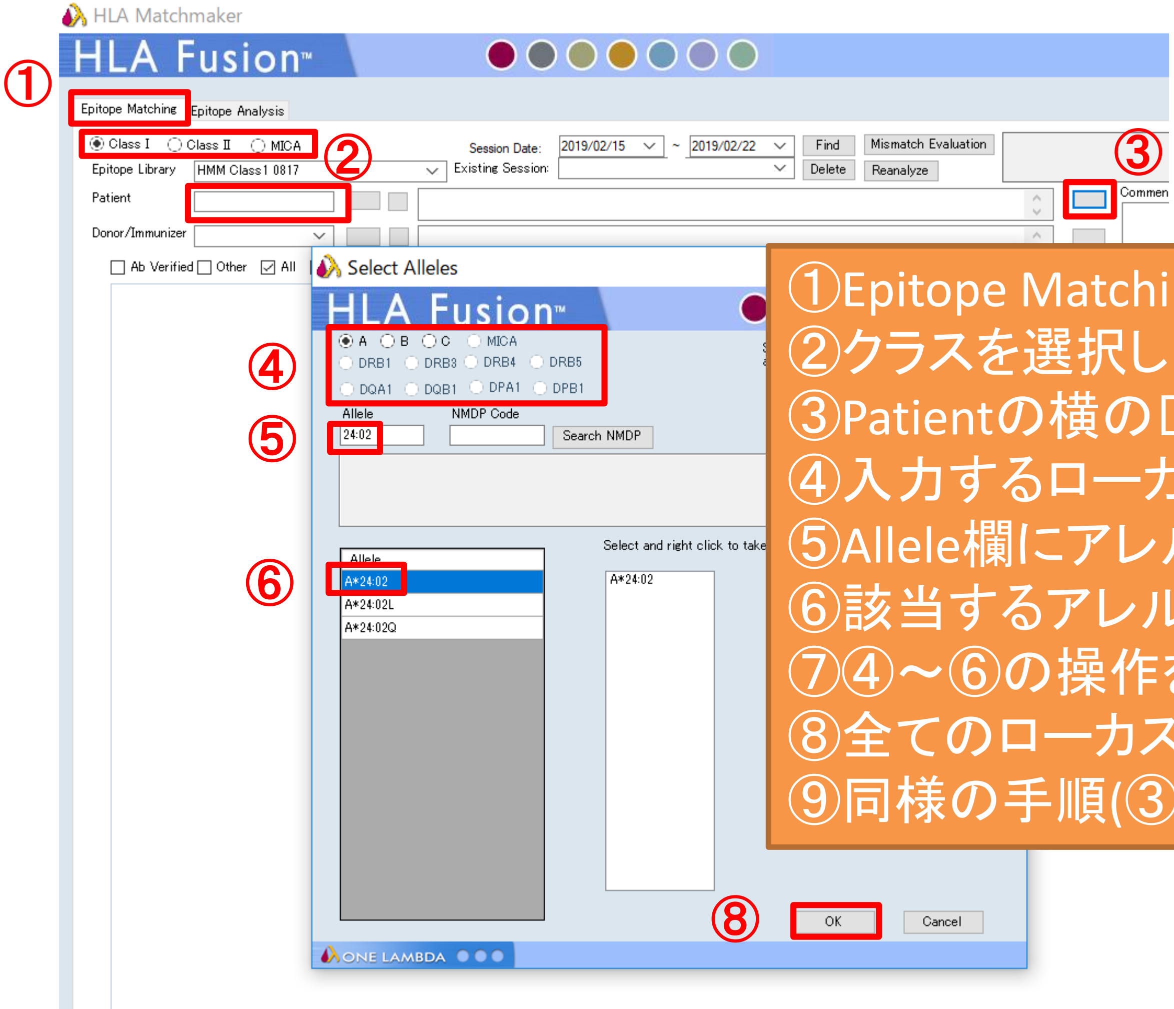
Import	Local Patient ID	Category Grp	FamilyID	First Name	Middle Name	Last Name	SSN	DOB	Gender	Ethnicity
☑	Donor 5	Human	Matchmaker	Thomas		Hsiao				
☑	P1QAP0317	Human	R	M		R				
☑	D1QAP0317	Human	L	K		L				
☑	Donor 4	Human	Matchmaker	Katja		Goldmann				
☑	P23456	Human	FAKE	Joe		Jones				
☑	P78912	Human	FAKE	Mary		Kent				
☑	Donor 1	Human	Matchmaker	Peter		Brescia				
☑	Donor 3	Human	Matchmaker	Harry		Lopez				
☑	Patient 2	Human	Matchmaker	Michael		Maz				
☑	P12345	Human	FAKE	John		Cha				
☑	Patient 1	Human	Matchmaker	John		Cha				
☑	Donor 2	Human	Matchmaker	Ugene		Govender				
☑	P67891	Human	FAKE	Peter		Brescia				

インポートするファイルを選択し開くをクリック
Importをクリックして終了です

Epitope Matching

タイピング情報の入力

手入力する場合


HLA Matchmaker
HLA Fusion™
①
Epitope Matching
Epitope Analysis
②
③
Find
Mismatch Evaluation
Delete
Reanalyze
Commen
Select Alleles
HLA Fusion™
④
⑤
⑥
Search NMDP
Select and right click to take
⑧
OK
Cancel
ONE LAMBDA

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 2019/02/15 ~ 2019/02/22

Existing Session:

Patient:

Donor/Immunizer:

☐ Ab Verified ☐ Other ☑ All

● A ○ B ○ C ○ MICA
○ DRB1 ○ DRB3 ○ DRB4 ○ DRB5
○ DQA1 ○ DQB1 ○ DPA1 ○ DPB1

Allele: 24:02

NMDP Code:

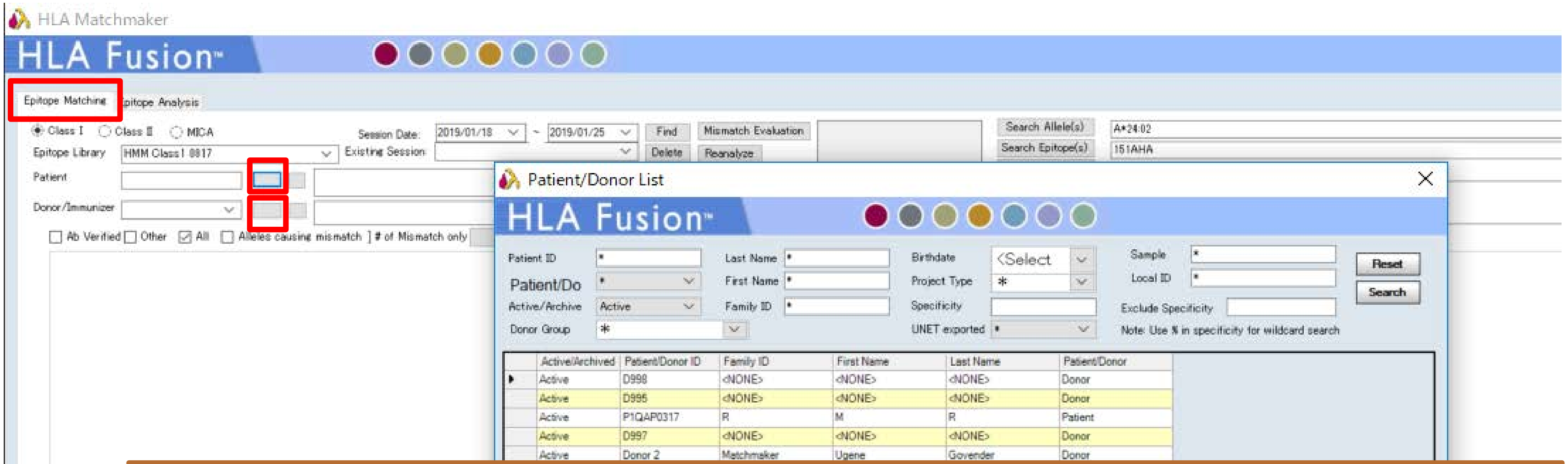
Allele
A*24:02
A*24:02L
A*24:02Q

A*24:02

①Epitope Matchingタブを開く
②クラスを選択し、Patient名を入力
③Patientの横の口(Select alleles)をクリック
④入力するローカスを選択
⑤Allele欄にアレルを入力
⑥該当するアレルをダブルクリック
⑦④～⑥の操作を繰り返す
⑧全てのローカスの入力が終了後OKをクリック
⑨同様の手順(③～⑧)でDonor情報も入力

タイピング情報の入力

HLA Fusionのデータベースより呼び出す場合


HLA Matchmaker
HLA Fusion™
Epitope Matching
Epitope Analysis
Find
Delete
Mismatch Evaluation
Reanalyze
Search Allele(s)
Search Epitope(s)
Patient/Donor List
HLA Fusion™
Reset
Search

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class I 0817

Session Date: 2019/01/18 ~ 2019/01/25

Existing Session:

Patient

Donor/Immunizer

☐ Ab Verified ☐ Other ☑ All ☐ Alleles causing mismatch] # of Mismatch only

A*24:02

151AHA

Patient ID: *

Patient/Do: *

Active/Archive: Active

Donor Group: ＊

Last Name: *

First Name: *

Family ID: *

Birthdate: <Select

Project Type: ＊

Specificity:

UNET exported: *

Sample: *

Local ID: *

Exclude Specificity:

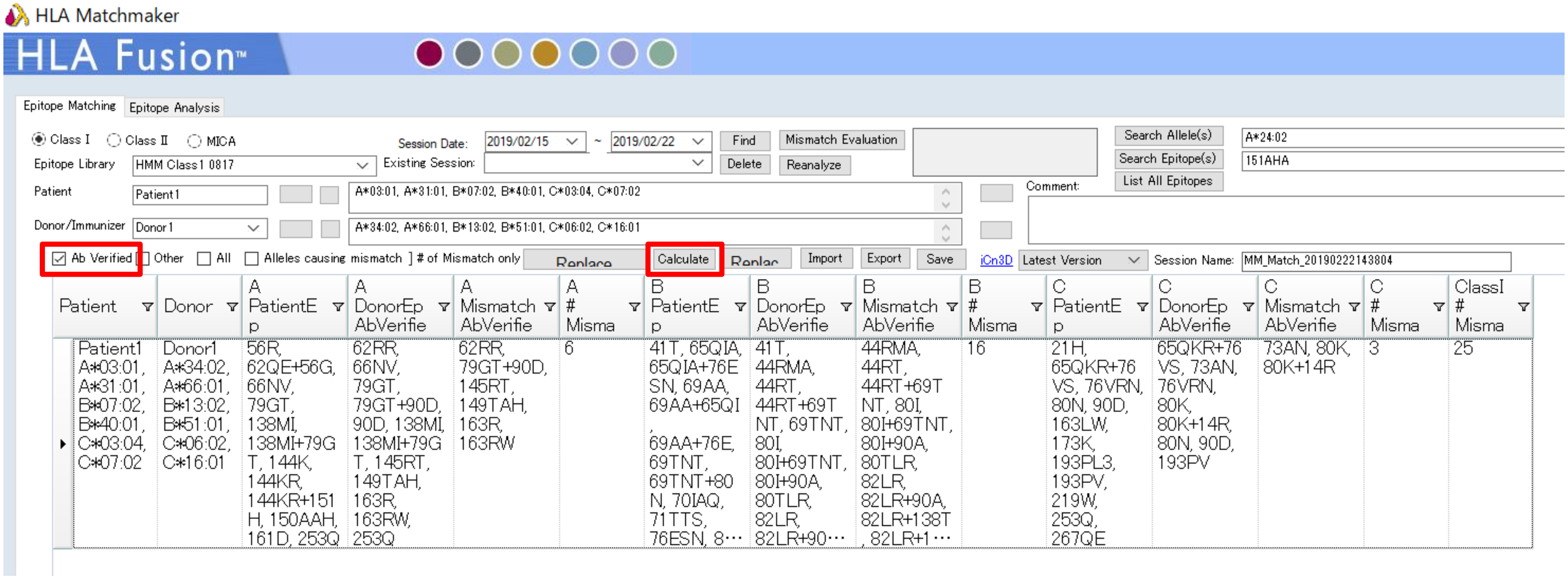
Note: Use % in specificity for wildcard search

	Active/Archived	Patient/Donor ID	Family ID	First Name	Last Name	Patient/Donor
▶	Active	D998	<NONE>	<NONE>	<NONE>	Donor
	Active	D995	<NONE>	<NONE>	<NONE>	Donor
	Active	P1QAP0317	R	M	R	Patient
	Active	D997	<NONE>	<NONE>	<NONE>	Donor
	Active	Donor 2	Matchmaker	Ugene	Govender	Donor

MatchMakerを開き、Epitope Matchingタブを開く
Patientの横の□(Select a patient from database)をクリック
登録されている情報が一覧で表示されるので、該当する情報を選択しダブルクリックする
Donor情報の入力も同様
インポートするcsvファイル内でPatientとDonor情報を紐づけて入力しておくことで、Patientを選択することで自動でDonor情報も入ります

ミスマッチ数の解析

- Patient及びDonorのタイピング結果を入力後、Calculateをクリック→結果が表示される
- 必ずAb Verifiedを選択する


HLA Matchmaker
HLA Fusion™
Epitope Matching
Epitope Analysis
Find
Mismatch Evaluation
Delete
Reanalyze
Search Allele(s)
Search Epitope(s)
List All Epitopes
Replace
Calculate
Replac
Import
Export
Save
iCn3D

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 2019/02/15 ~ 2019/02/22

Existing Session:

Patient: Patient1 — A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02

Donor/Immunizer: Donor1 — A*34:02, A*66:01, B*13:02, B*51:01, C*06:02, C*16:01

Search Allele(s): A*24:02

Search Epitope(s): 151AHA

Comment:

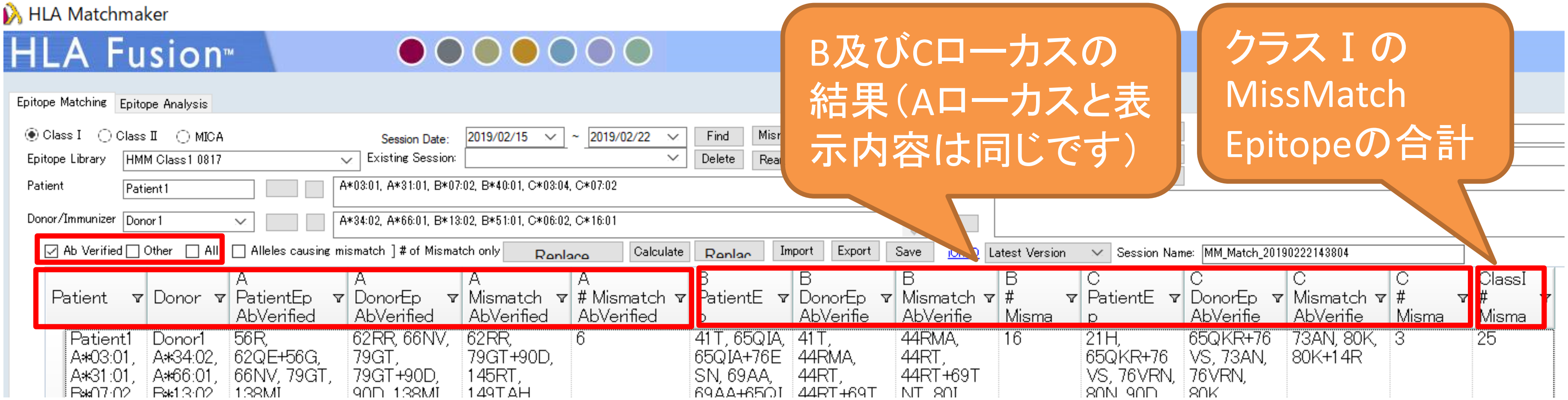
☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch] # of Mismatch only

Latest Version

Session Name: MM_Match_20190222143804

Patient	Donor	A PatientEp	A DonorEp AbVerifie	A Mismatch AbVerifie	A # Misma	B PatientEp	B DonorEp AbVerifie	B Mismatch AbVerifie	B # Misma	C PatientEp	C DonorEp AbVerifie	C Mismatch AbVerifie	C # Misma	ClassI # Misma
Patient1 A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02	Donor1 A*34:02, A*66:01, B*13:02, B*51:01, C*06:02, C*16:01	56R, 62QE+56G, 66NV, 79GT, 138MI, 138MI+79GT, 144K, 144KR, 144KR+151H, 150AAH, 161D, 253Q	62RR, 66NV, 79GT, 79GT+90D, 90D, 138MI, 138MI+79GT, 145RT, 149TAH, 163R, 163RW, 253Q	62RR, 79GT+90D, 145RT, 149TAH, 163R, 163RW	6	41T, 65QIA, 65QIA+76ESN, 69AA, 69AA+65QI, 69AA+76E, 69TNT, 69TNT+80N, 70IAQ, 71TTS, 76ESN, 8⋯	41T, 44RMA, 44RT, 44RT+69TNT, 69TNT, 80I, 80I+69TNT, 80I+90A, 80TLR, 82LR, 82LR+90⋯	44RMA, 44RT, 44RT+69TNT, 80I, 80I+69TNT, 80I+90A, 80TLR, 82LR, 82LR+90A, 82LR+138T, 82LR+1⋯	16	21H, 65QKR+76VS, 76VRN, 80N, 90D, 163LW, 173K, 193PL3, 193PV, 219W, 253Q, 267QE	65QKR+76VS, 73AN, 76VRN, 80K, 80K+14R, 80N, 90D, 193PV	73AN, 80K, 80K+14R	3	25

画面の見方



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 2019/02/15 ~ 2019/02/22

Existing Session:

Patient: Patient1 — A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02

Donor/Immunizer: Donor1 — A*34:02, A*66:01, B*13:02, B*51:01, C*06:02, C*16:01

☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch] # of Mismatch only

Latest Version

Session Name: MM_Match_20190222143804

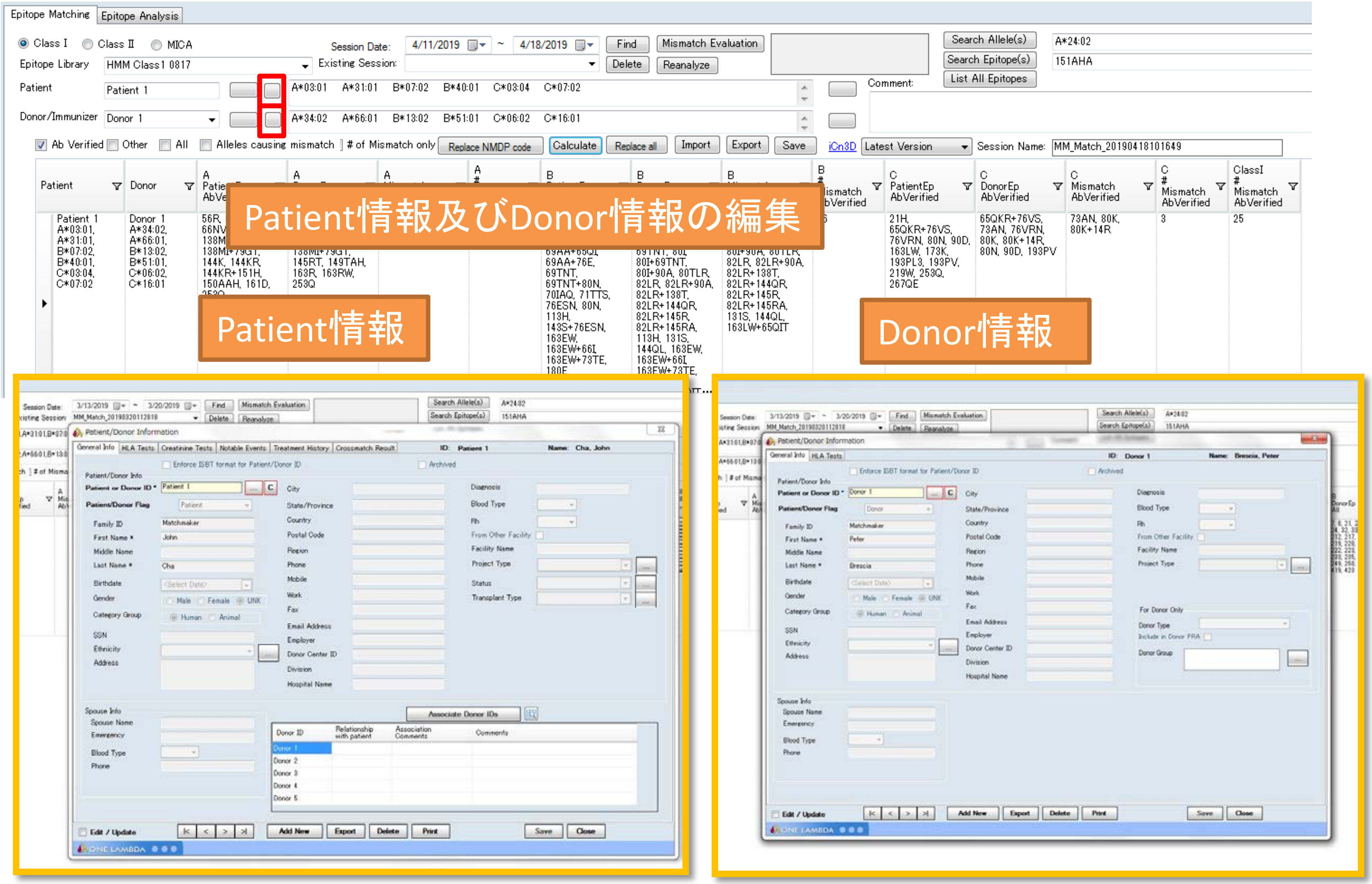
Patient	Donor	A PatientEp AbVerified	A DonorEp AbVerified	A Mismatch AbVerified	A # Mismatch AbVerified	B PatientEp	B DonorEp AbVerifie	B Mismatch AbVerifie	B # Misma	C PatientEp	C DonorEp AbVerifie	C Mismatch AbVerifie	C # Misma	ClassI # Misma
Patient1 A*03:01, A*31:01,	Donor1 A*34:02, A*66:01,	56R, 62QE+56G, 66NV, 79GT,	62RR, 66NV, 79GT, 79GT+90D,	62RR, 79GT+90D, 145RT,	6	41T, 65QIA, 65QIA+76E SN, 69AA,	41T, 44RMA, 44RT,	44RMA, 44RT, 44RT+69T	16	21H, 65QKR+76 VS, 76VRN,	65QKR+76 VS, 73AN, 76VRN,	73AN, 80K, 80K+14R	3	25

B及びCローカスの結果（Aローカスと表示内容は同じです）

クラスＩのMissMatch Epitopeの合計

- Ab Verified：LABScreen Single Antigenで確認されたEpitope
  ＊解析の際は「Ab Verified」にチェックを入れてください＊
- Other：LABScreen Single Antigenで確認されていないEpitope
- All：Ab VerifiedとOtherの両方を表示
- Patient：PatientのHLAタイピング結果
- Donor：DonorのHLAタイピング結果
- A PatientEp AbVerified：患者のAローカスのEpitope
- A DonorEp AbVerified：ドナーのAローカスのEpitope
- A Mismatch AbVerified：AローカスのMissMatch Epitope
- A# Mismatch AbVerified：AローカスのMissMatch Epitopeの数

Patient及びDonor情報の編集


Epitope Matching
Epitope Analysis
Find
Mismatch Evaluation
Delete
Reanalyze
Search Allele(s)
Search Epitope(s)
List All Epitopes
Replace NMDP code
Calculate
Replace all
Import
Export
Save
iCn3D
General Info
HLA Tests
Creatinine Tests
Notable Events
Treatment History
Crossmatch Result
Associate Donor IDs
Edit / Update
Add New
Print
Close
ONE LAMBDA

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 4/11/2019 ~ 4/18/2019

Existing Session:

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor/Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

A*24:02

151AHA

Comment:

☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch ☐ # of Mismatch only

Latest Version

Session Name: MM_Match_20190418101649

Patient情報及びDonor情報の編集

Patient情報

Donor情報

Patient/Donor Information — ID: Patient 1 Name: Cha, John

☐ Enforce ISBT format for Patient/Donor ID ☐ Archived

Patient/Donor Info

Patient or Donor ID *: Patient 1

Patient/Donor Flag: Patient

Family ID: Matchmaker

First Name *: John

Last Name *: Cha

Birthdate: <Select Date>

Gender: ○ Male ○ Female ● UNK

Category Group: ● Human ○ Animal

Donor ID	Relationship with patient	Association Comments	Comments
Donor 1			
Donor 2			
Donor 3			
Donor 4			
Donor 5			

Patient/Donor Information — ID: Donor 1 Name: Brescia, Peter

Patient or Donor ID *: Donor 1

Patient/Donor Flag: Donor

Family ID: Matchmaker

First Name *: Peter

Last Name *: Brescia

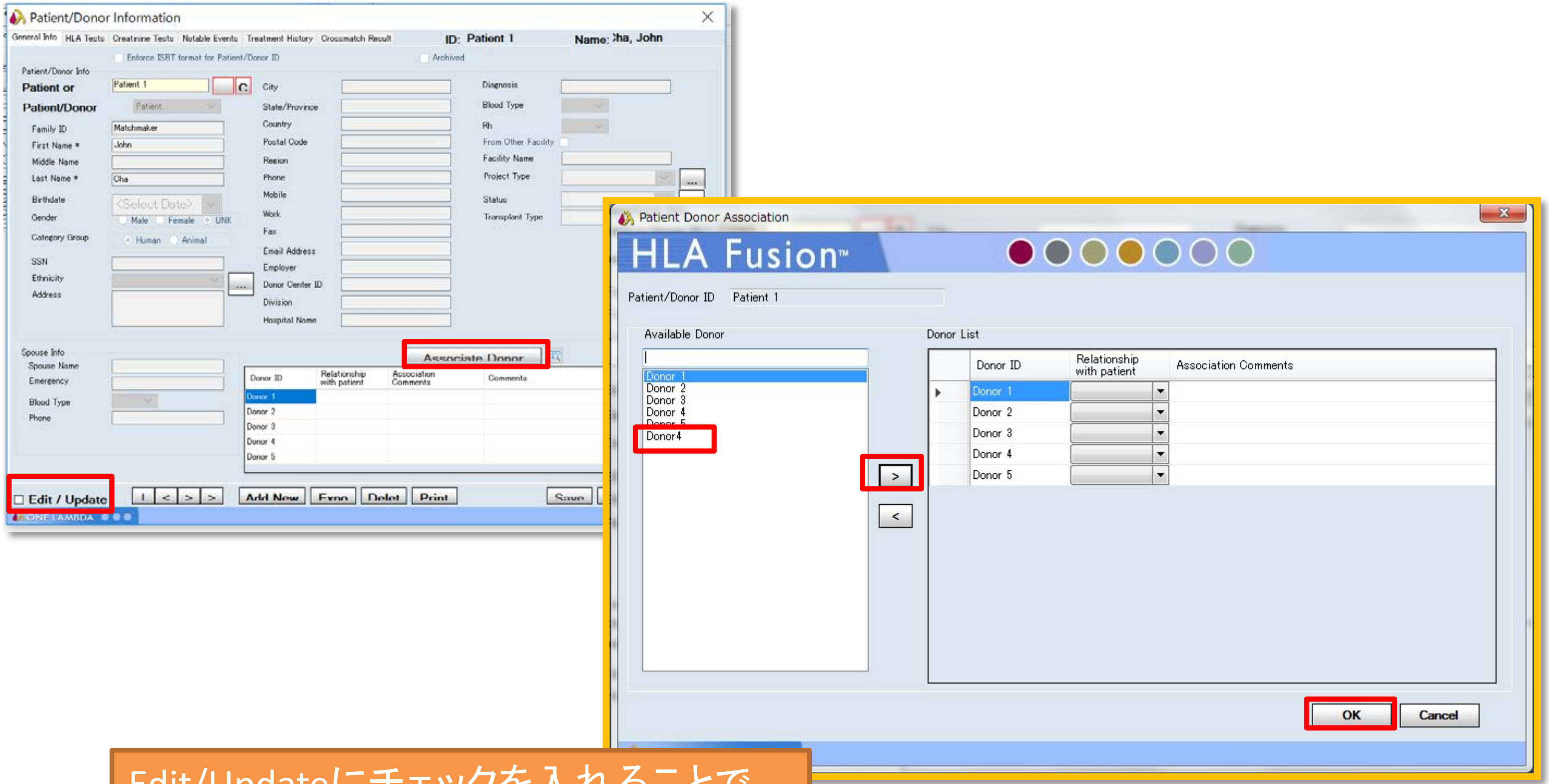
Birthdate: <Select Date>

Gender: ○ Male ○ Female ● UNK

Category Group: ● Human ○ Animal

For Donor Only: Donor Type; ☐ Include in Donor PRA; Donor Group

Patient情報の編集


Patient/Donor Information
General Info
HLA Tests
Creatinine Tests
Notable Events
Treatment History
Crossmatch Result
Enforce ISBT format for Patient/Donor ID
Archived
Patient/Donor Info
City
State/Province
Country
Postal Code
Region
Phone
Mobile
Work
Fax
Email Address
Employer
Donor Center ID
Division
Hospital Name
Diagnosis
Blood Type
Rh
From Other Facility
Facility Name
Project Type
Status
Transplant Type
Ethnicity
Address
Spouse Info
Spouse Name
Emergency
Blood Type
Phone
Associate Donor
Edit / Update
Add New
Expo
Delet
Print
Save
ONE LAMBDA
Patient Donor Association
HLA Fusion™
Available Donor
Donor List
>
<
OK
Cancel

ID: Patient 1 Name: Cha, John

Patient or Patient/Donor: Patient 1

Patient/Donor: Patient

Family ID: Matchmaker

First Name *: John

Middle Name:

Last Name *: Cha

Birthdate: <Select Date>

Gender: ☐ Male ☐ Female ○ UNK

Category Group: ○ Human ○ Animal

SSN:

Donor ID	Relationship with patient	Association Comments	Comments
Donor 1			
Donor 2			
Donor 3			
Donor 4			
Donor 5			

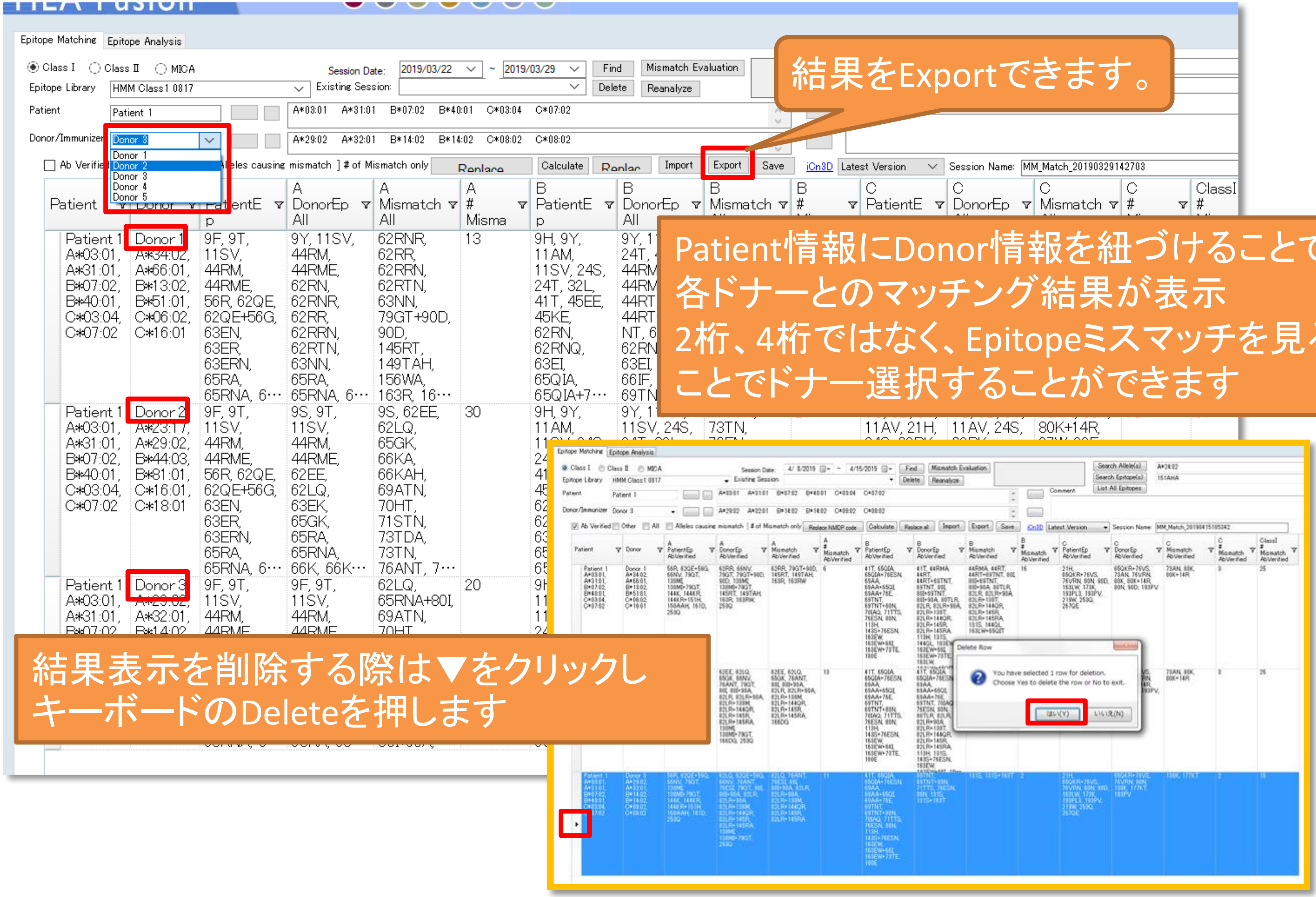
Patient/Donor ID: Patient 1

Available Donor:
- Donor 1
- Donor 2
- Donor 3
- Donor 4
- Donor 5
- Donor4

Donor ID	Relationship with patient	Association Comments
Donor 1		
Donor 2		
Donor 3		
Donor 4		
Donor 5		

Edit/Updateにチェックを入れることで「Associate Donor IDs」からPatient情報とDonor情報の紐づけが可能

複数ドナーのMatching結果表示



Epitope Matching　Epitope Analysis

● Class I　○ Class II　○ MICA

Session Date: 2019/03/22 ~ 2019/03/29

Epitope Library: HMM Class1 0817

Patient: Patient 1　A*03:01　A*31:01　B*07:02　B*40:01　C*03:04　C*07:02

Donor/Immunizer: Donor 3　A*29:02　A*32:01　B*14:02　B*14:02　C*08:02　C*08:02

Donor 1 / Donor 2 / Donor 3 / Donor 4 / Donor 5

Session Name: MM_Match_20190329142703

Patient	Donor	A PatientEp	A DonorEp All	A Mismatch All	A # Mismatch
Patient 1 A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02	Donor 1 A*34:02, A*66:01, B*13:02, B*51:01, C*06:02, C*16:01	9F, 9T, 11SV, 44RM, 44RME, 56R, 62QE, 62QE+56G, 63EN, 63ER, 63ERN, 65RA, 65RNA, 6…	9Y, 11SV, 44RM, 44RME, 62RN, 62RNR, 62RR, 62RRN, 62RTN, 63NN, 65RA, 65RNA, 6…	62RNR, 62RR, 62RRN, 62RTN, 63NN, 79GT+90D, 90D, 145RT, 149TAH, 156WA, 163R, 16…	13
Patient 1 A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02	Donor 2 A*23:17, A*29:02, B*44:03, B*81:01, C*16:01, C*18:01	9F, 9T, 11SV, 44RM, 44RME, 56R, 62QE, 62QE+56G, 63EN, 63ER, 63ERN, 65RA, 65RNA, 6…	9S, 9T, 11SV, 44RM, 44RME, 62EE, 62LQ, 63EK, 65GK, 65RA, 65RNA, 66K, 66K…	9S, 62EE, 62LQ, 65GK, 66KA, 66KAH, 69ATN, 70HT, 71STN, 73TDA, 73TN, 76ANT, 7…	30
Patient 1 A*03:01, A*31:01, B*07:02	Donor 3 A*29:02, A*32:01, B*14:02	9F, 9T, 11SV, 44RM, 44RME	9F, 9T, 11SV, 44RM, 44RME	62LQ, 65RNA+80I, 69ATN, 70HT	20

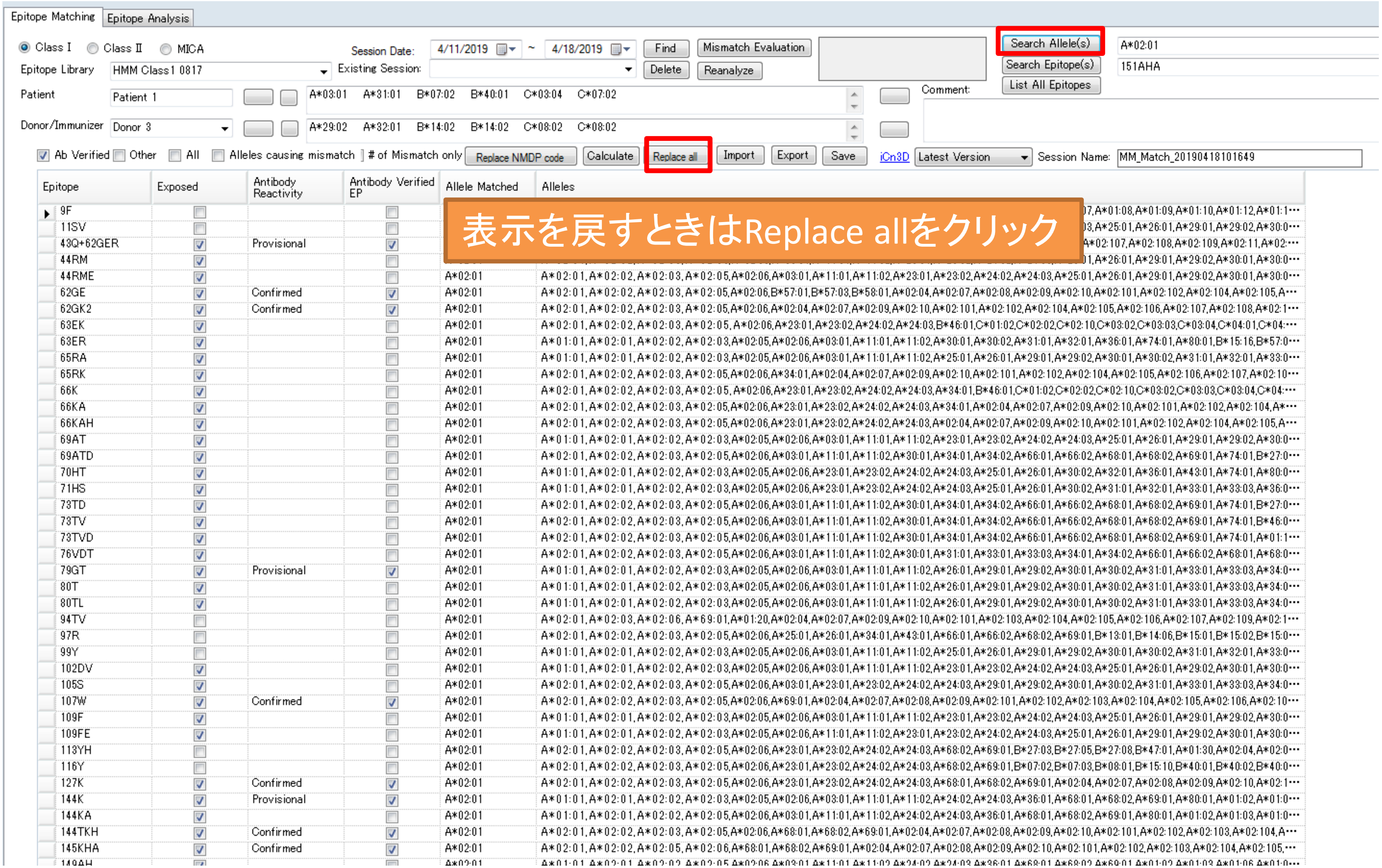
Find
Mismatch Evaluation
Delete
Reanalyze
Calculate
Import
Export
Save
iCn3D
Latest Version
Delete Row
You have selected 1 row for deletion.
Choose Yes to delete the row or No to exit.
はい(Y)
いいえ(N)

結果をExportできます。

Patient情報にDonor情報を紐づけることで、各ドナーとのマッチング結果が表示
2桁、4桁ではなく、Epitopeミスマッチを見ることでドナー選択することができます

結果表示を削除する際は▼をクリックしキーボードのDeleteを押します

Search Allele(s)



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 4/11/2019 ~ 4/18/2019

Existing Session:

Search Allele(s): A*02:01

Search Epitope(s): 151AHA

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor/Immunizer: Donor 3 — A*29:02 A*32:01 B*14:02 B*14:02 C*08:02 C*08:02

Comment:

☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch # of Mismatch only

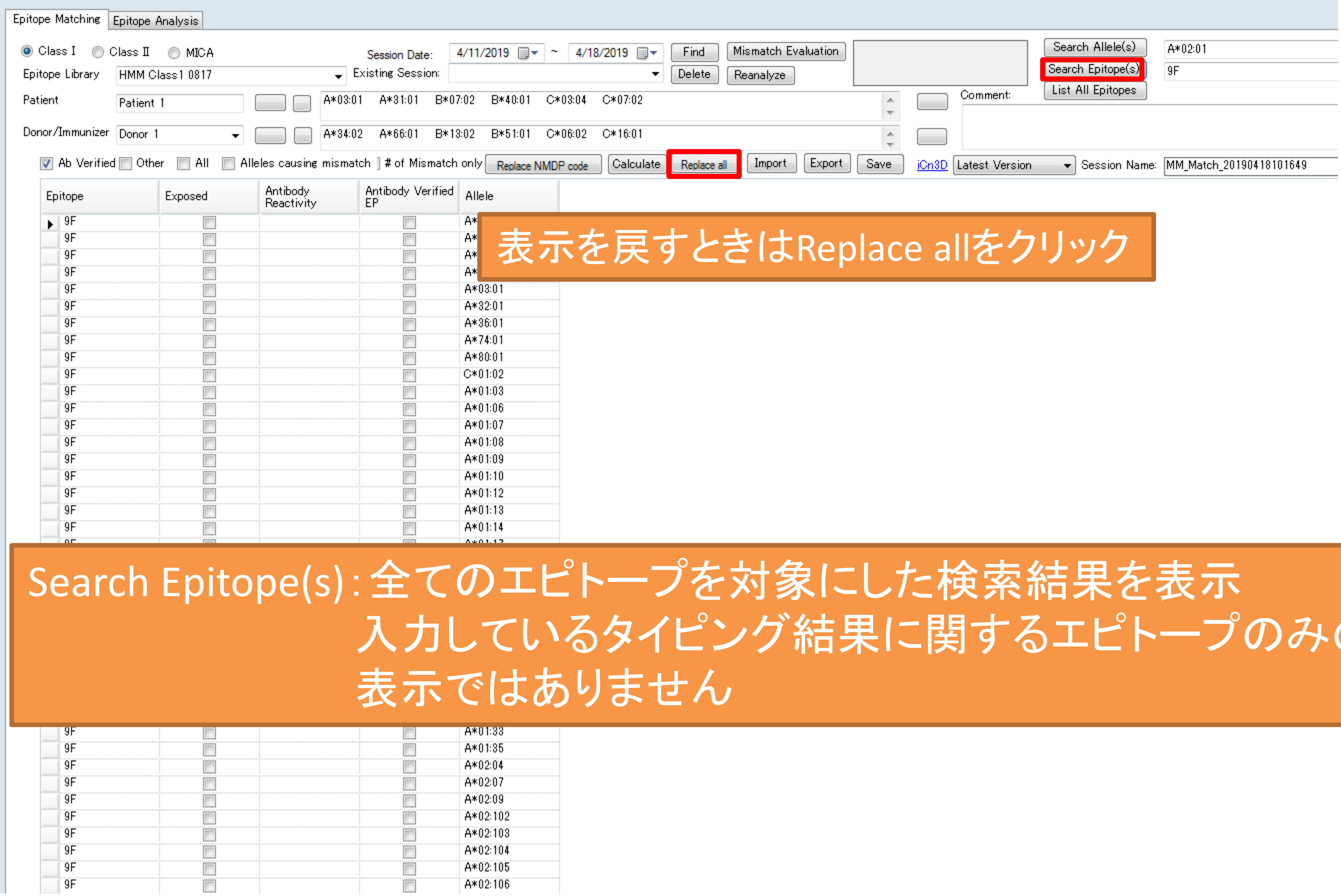
Latest Version

Session Name: MM_Match_20190418101649

表示を戻すときはReplace allをクリック

Epitope	Exposed	Antibody Reactivity	Antibody Verified EP	Allele Matched	Alleles
9F	☐		☐		7,A*01:08,A*01:09,A*01:10,A*01:12,A*01:1…
11SV	☐		☐		3,A*25:01,A*26:01,A*29:01,A*29:02,A*30:0…
43Q+62GER	☑	Provisional	☑		A*02:107,A*02:108,A*02:109,A*02:11,A*02:…
44RM	☑		☐		1,A*26:01,A*29:01,A*29:02,A*30:01,A*30:0…
44RME	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*29:01,A*29:02,A*30:01,A*30:0…
62GE	☑	Confirmed	☑	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,B*57:01,B*57:03,B*58:01,A*02:04,A*02:07,A*02:08,A*02:09,A*02:10,A*02:101,A*02:102,A*02:104,A*02:105,A…
62GK2	☑	Confirmed	☑	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*02:04,A*02:07,A*02:09,A*02:10,A*02:101,A*02:102,A*02:104,A*02:105,A*02:106,A*02:107,A*02:108,A*02:1…
63EK	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,B*46:01,C*01:02,C*02:02,C*02:10,C*03:02,C*03:03,C*03:04,C*04:01,C*04:…
63ER	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*30:01,A*30:02,A*31:01,A*32:01,A*36:01,A*74:01,A*80:01,B*15:16,B*57:0…
65RA	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*25:01,A*26:01,A*29:01,A*29:02,A*30:01,A*30:02,A*31:01,A*32:01,A*33:0…
65RK	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*34:01,A*02:04,A*02:07,A*02:09,A*02:10,A*02:101,A*02:102,A*02:104,A*02:105,A*02:106,A*02:107,A*02:10…
66K	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*34:01,B*46:01,C*01:02,C*02:02,C*02:10,C*03:02,C*03:03,C*03:04,C*04:…
66KA	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*34:01,A*02:04,A*02:07,A*02:09,A*02:10,A*02:101,A*02:102,A*02:104,A*…
66KAH	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*02:04,A*02:07,A*02:09,A*02:10,A*02:101,A*02:102,A*02:104,A*02:105,A…
69AT	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*29:01,A*29:02,A*30:0…
69ATD	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*30:01,A*34:01,A*34:02,A*66:01,A*66:02,A*68:01,A*68:02,A*69:01,A*74:01,B*27:0…
70HT	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*30:02,A*32:01,A*36:01,A*43:01,A*74:01,A*80:0…
71HS	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*30:02,A*31:01,A*32:01,A*33:01,A*33:03,A*36:0…
73TD	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*30:01,A*34:01,A*34:02,A*66:01,A*66:02,A*68:01,A*68:02,A*69:01,A*74:01,B*27:0…
73TV	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*30:01,A*34:01,A*34:02,A*66:01,A*66:02,A*68:01,A*68:02,A*69:01,A*74:01,B*46:0…
73TVD	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*30:01,A*34:01,A*34:02,A*66:01,A*66:02,A*68:01,A*68:02,A*69:01,A*74:01,A*01:1…
76VDT	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*30:01,A*31:01,A*33:01,A*33:03,A*34:01,A*34:02,A*66:01,A*66:02,A*68:01,A*68:0…
79GT	☑	Provisional	☑	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*26:01,A*29:01,A*29:02,A*30:01,A*30:02,A*31:01,A*33:01,A*33:03,A*34:0…
80T	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*26:01,A*29:01,A*29:02,A*30:01,A*30:02,A*31:01,A*33:01,A*33:03,A*34:0…
80TL	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*26:01,A*29:01,A*29:02,A*30:01,A*30:02,A*31:01,A*33:01,A*33:03,A*34:0…
94TV	☐		☐	A*02:01	A*02:01,A*02:03,A*02:06,A*69:01,A*01:20,A*02:04,A*02:07,A*02:09,A*02:10,A*02:101,A*02:103,A*02:104,A*02:105,A*02:106,A*02:107,A*02:109,A*02:1…
97R	☐		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*25:01,A*26:01,A*34:01,A*43:01,A*66:01,A*66:02,A*68:02,A*69:01,B*13:01,B*14:06,B*15:01,B*15:02,B*15:0…
99Y	☐		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*25:01,A*26:01,A*29:01,A*29:02,A*30:01,A*30:02,A*31:01,A*32:01,A*33:0…
102DV	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*29:02,A*30:01,A*30:0…
105S	☑		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*23:01,A*23:02,A*24:02,A*24:03,A*29:01,A*29:02,A*30:01,A*30:02,A*31:01,A*33:01,A*33:03,A*34:0…
107W	☑	Confirmed	☑	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*69:01,A*02:04,A*02:07,A*02:08,A*02:09,A*02:101,A*02:102,A*02:103,A*02:104,A*02:105,A*02:106,A*02:10…
109F	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*29:01,A*29:02,A*30:0…
109FE	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*11:01,A*11:02,A*23:01,A*23:02,A*24:02,A*24:03,A*25:01,A*26:01,A*29:01,A*29:02,A*30:01,A*30:0…
113YH	☐		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*68:02,A*69:01,B*27:03,B*27:05,B*27:08,B*47:01,A*01:30,A*02:04,A*02:0…
116Y	☐		☐	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*68:02,A*69:01,B*07:02,B*07:03,B*08:01,B*15:10,B*40:01,B*40:02,B*40:0…
127K	☑	Confirmed	☑	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*23:01,A*23:02,A*24:02,A*24:03,A*68:01,A*68:02,A*69:01,A*02:04,A*02:07,A*02:08,A*02:09,A*02:10,A*02:1…
144K	☑	Provisional	☑	A*02:01	A*01:01,A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*24:02,A*24:03,A*36:01,A*68:01,A*68:02,A*69:01,A*80:01,A*01:02,A*01:0…
144KA	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*24:02,A*24:03,A*36:01,A*68:01,A*68:02,A*69:01,A*80:01,A*01:02,A*01:03,A*01:0…
144TKH	☑	Confirmed	☑	A*02:01	A*02:01,A*02:02,A*02:03,A*02:05,A*02:06,A*68:01,A*68:02,A*69:01,A*02:04,A*02:07,A*02:08,A*02:09,A*02:10,A*02:101,A*02:102,A*02:103,A*02:104,A…
145KHA	☑	Confirmed	☑	A*02:01	A*02:01,A*02:02,A*02:05,A*02:06,A*68:01,A*68:02,A*69:01,A*02:04,A*02:07,A*02:08,A*02:09,A*02:10,A*02:101,A*02:102,A*02:103,A*02:104,A*02:105,…
149AH	☑		☐	A*02:01	A*01:01,A*02:01,A*02:02,A*02:05,A*02:06,A*03:01,A*11:01,A*11:02,A*24:02,A*24:03,A*36:01,A*68:01,A*68:02,A*69:01,A*01:02,A*01:03,A*01:06,A*01:0…

Search Epitope(s)


Epitope Matching
Epitope Analysis
Find
Mismatch Evaluation
Delete
Reanalyze
Search Allele(s)
Search Epitope(s)
List All Epitopes
Replace NMDP code
Calculate
Replace all
Import
Export
Save
iCn3D

● Class I ○ Class II ○ MICA

Session Date: 4/11/2019 ~ 4/18/2019

Epitope Library: HMM Class1 0817

Existing Session:

Patient: Patient 1 A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor/Immunizer: Donor 1 A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch] # of Mismatch only

A*02:01

9F

Comment:

Latest Version

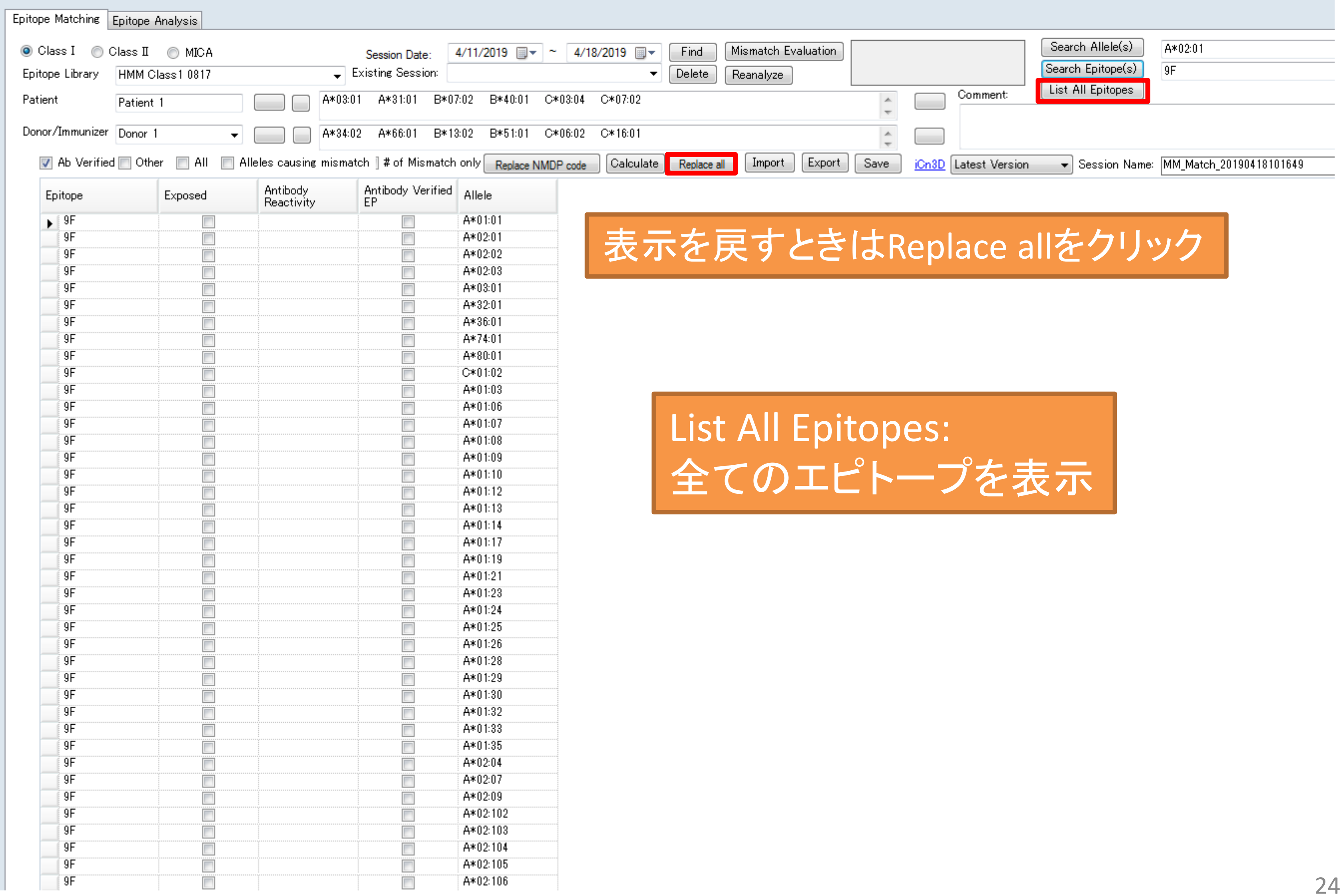
Session Name: MM_Match_20190418101649

Epitope	Exposed	Antibody Reactivity	Antibody Verified EP	Allele
9F	☐		☐	A*
9F	☐		☐	A*
9F	☐		☐	A*
9F	☐		☐	A*
9F	☐		☐	A*03:01
9F	☐		☐	A*32:01
9F	☐		☐	A*36:01
9F	☐		☐	A*74:01
9F	☐		☐	A*80:01
9F	☐		☐	C*01:02
9F	☐		☐	A*01:03
9F	☐		☐	A*01:06
9F	☐		☐	A*01:07
9F	☐		☐	A*01:08
9F	☐		☐	A*01:09
9F	☐		☐	A*01:10
9F	☐		☐	A*01:12
9F	☐		☐	A*01:13
9F	☐		☐	A*01:14
9F	☐		☐	A*01:33
9F	☐		☐	A*01:35
9F	☐		☐	A*02:04
9F	☐		☐	A*02:07
9F	☐		☐	A*02:09
9F	☐		☐	A*02:102
9F	☐		☐	A*02:103
9F	☐		☐	A*02:104
9F	☐		☐	A*02:105
9F	☐		☐	A*02:106

表示を戻すときはReplace allをクリック

Search Epitope(s) : 全てのエピトープを対象にした検索結果を表示
入力しているタイピング結果に関するエピトープのみの
表示ではありません

List All Epitopes


Epitope Matching
Epitope Analysis
Find
Mismatch Evaluation
Delete
Reanalyze
Search Allele(s)
Search Epitope(s)
List All Epitopes
Replace NMDP code
Calculate
Replace all
Import
Export
Save
iCn3D

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 4/11/2019 ~ 4/18/2019

Existing Session:

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor/Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

A*02:01

9F

Comment:

☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch] # of Mismatch only

Latest Version

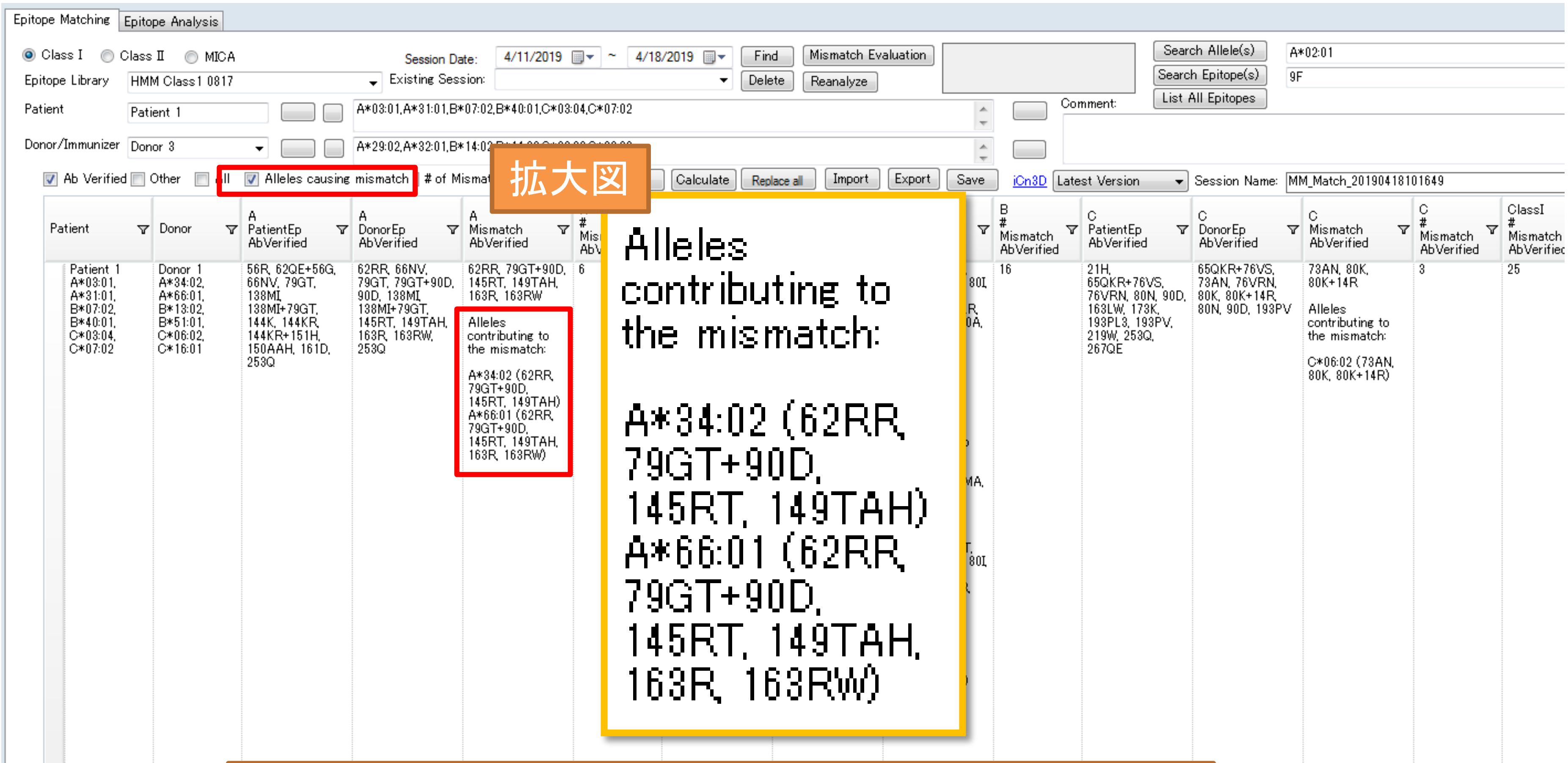
Session Name: MM_Match_20190418101649

Epitope	Exposed	Antibody Reactivity	Antibody Verified EP	Allele
9F	☐		☐	A*01:01
9F	☐		☐	A*02:01
9F	☐		☐	A*02:02
9F	☐		☐	A*02:03
9F	☐		☐	A*03:01
9F	☐		☐	A*32:01
9F	☐		☐	A*36:01
9F	☐		☐	A*74:01
9F	☐		☐	A*80:01
9F	☐		☐	C*01:02
9F	☐		☐	A*01:03
9F	☐		☐	A*01:06
9F	☐		☐	A*01:07
9F	☐		☐	A*01:08
9F	☐		☐	A*01:09
9F	☐		☐	A*01:10
9F	☐		☐	A*01:12
9F	☐		☐	A*01:13
9F	☐		☐	A*01:14
9F	☐		☐	A*01:17
9F	☐		☐	A*01:19
9F	☐		☐	A*01:21
9F	☐		☐	A*01:23
9F	☐		☐	A*01:24
9F	☐		☐	A*01:25
9F	☐		☐	A*01:26
9F	☐		☐	A*01:28
9F	☐		☐	A*01:29
9F	☐		☐	A*01:30
9F	☐		☐	A*01:32
9F	☐		☐	A*01:33
9F	☐		☐	A*01:35
9F	☐		☐	A*02:04
9F	☐		☐	A*02:07
9F	☐		☐	A*02:09
9F	☐		☐	A*02:102
9F	☐		☐	A*02:103
9F	☐		☐	A*02:104
9F	☐		☐	A*02:105
9F	☐		☐	A*02:106

表示を戻すときはReplace allをクリック

List All Epitopes:
全てのエピトープを表示

Alleles causing mismatch


Epitope Matching
Epitope Analysis
Find
Delete
Mismatch Evaluation
Reanalyze
Search Allele(s)
Search Epitope(s)
List All Epitopes
Calculate
Replace all
Import
Export
Save
iCn3D

● Class Ⅰ ○ Class Ⅱ ○ MICA

Session Date: 4/11/2019 ~ 4/18/2019

Epitope Library: HMM Class1 0817

Existing Session:

Search Allele(s): A*02:01

Search Epitope(s): 9F

Patient: Patient 1 — A*03:01,A*31:01,B*07:02,B*40:01,C*03:04,C*07:02

Donor/Immunizer: Donor 3 — A*29:02,A*32:01,B*14:02

Comment:

☑ Ab Verified ☐ Other ☐ All ☑ Alleles causing mismatch # of Mismat

Latest Version

Session Name: MM_Match_20190418101649

Patient	Donor	A PatientEp AbVerified	A DonorEp AbVerified	A Mismatch AbVerified	# Mis AbV
Patient 1 A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02	Donor 1 A*34:02, A*66:01, B*13:02, B*51:01, C*06:02, C*16:01	56R, 62QE+56G, 66NV, 79GT, 138MI, 138MI+79GT, 144K, 144KR, 144KR+151H, 150AAH, 161D, 253Q	62RR, 66NV, 79GT, 79GT+90D, 90D, 138MI, 138MI+79GT, 145RT, 149TAH, 163R, 163RW, 253Q	62RR, 79GT+90D, 145RT, 149TAH, 163R, 163RW Alleles contributing to the mismatch: A*34:02 (62RR, 79GT+90D, 145RT, 149TAH) A*66:01 (62RR, 79GT+90D, 145RT, 149TAH, 163R, 163RW)	6

B # Mismatch AbVerified	C PatientEp AbVerified	C DonorEp AbVerified	C Mismatch AbVerified	C # Mismatch AbVerified	ClassI # Mismatch AbVerified
16	21H, 65QKR+76VS, 76VRN, 80N, 90D, 163LW, 173K, 193PL3, 193PV, 219W, 253Q, 267QE	65QKR+76VS, 73AN, 76VRN, 80K, 80K+14R, 80N, 90D, 193PV	73AN, 80K, 80K+14R Alleles contributing to the mismatch: C*06:02 (73AN, 80K, 80K+14R)	3	25

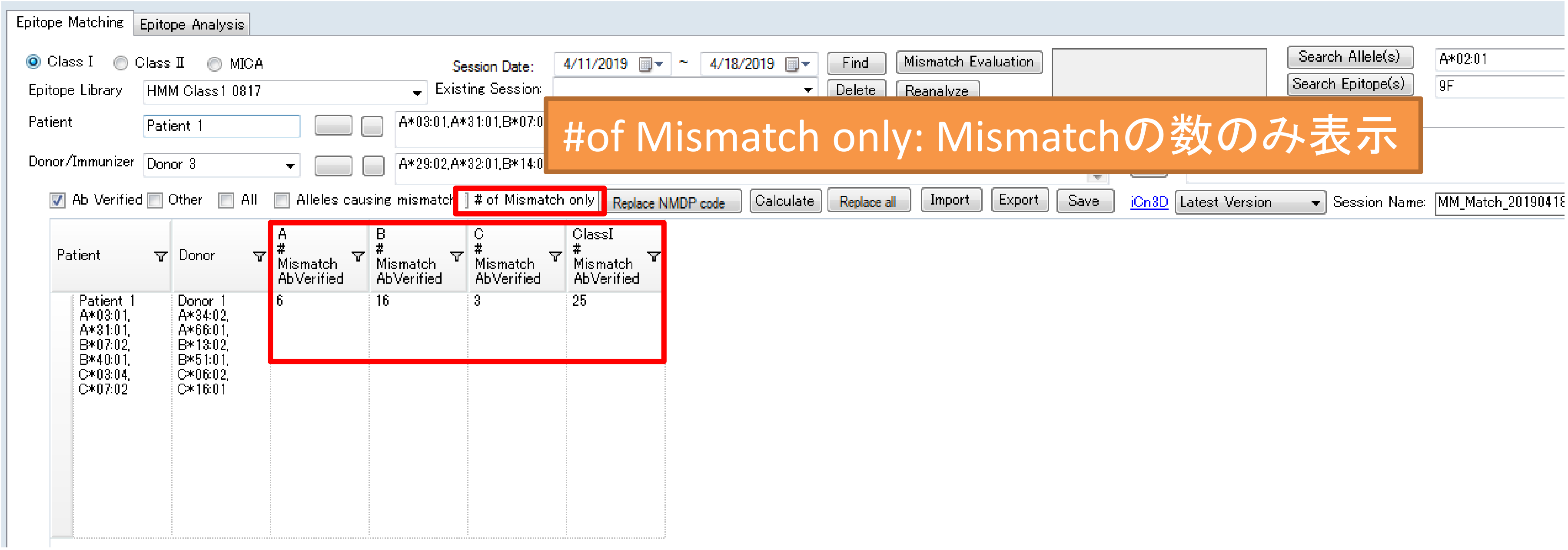
拡大図

Alleles contributing to the mismatch:

A*34:02 (62RR, 79GT+90D, 145RT, 149TAH)
A*66:01 (62RR, 79GT+90D, 145RT, 149TAH, 163R, 163RW)

Alleles causing mismatch:
Mismatch Epitopeに起因するアレルが表示される

#of Mismatch only


Epitope Matching
Epitope Analysis
Find
Mismatch Evaluation
Delete
Reanalyze
Search Allele(s)
Search Epitope(s)
Replace NMDP code
Calculate
Replace all
Import
Export
Save
iCn3D

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817

Session Date: 4/11/2019 ~ 4/18/2019

Existing Session:

Patient: Patient 1 A*03:01,A*31:01,B*07:0

Donor/Immunizer: Donor 3 A*29:02,A*32:01,B*14:0

Search Allele(s): A*02:01

Search Epitope(s): 9F

☑ Ab Verified ☐ Other ☐ All ☐ Alleles causing mismatch ☐ # of Mismatch only

Latest Version

Session Name: MM_Match_2019041

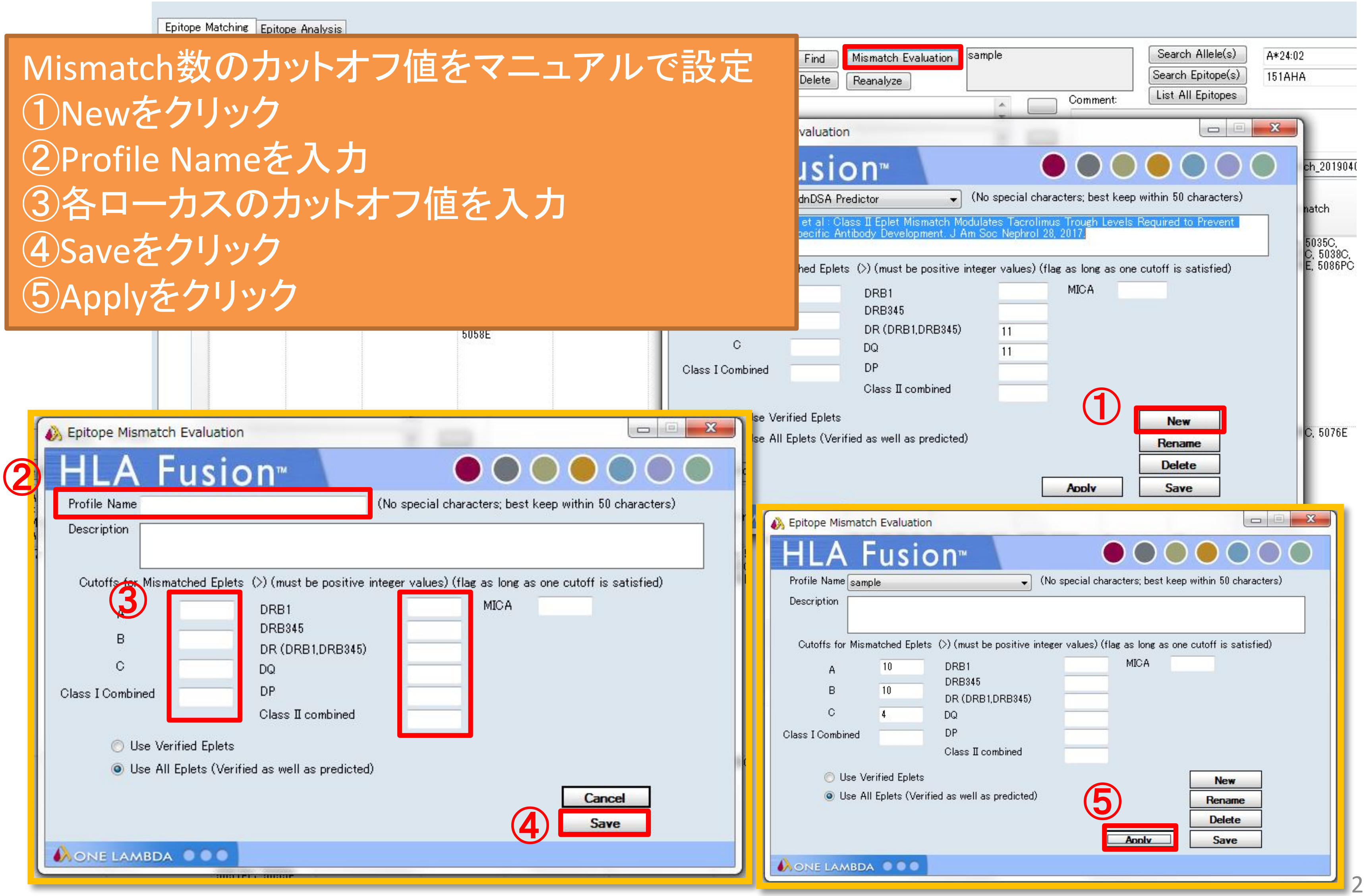
Patient	Donor	A # Mismatch AbVerified	B # Mismatch AbVerified	C # Mismatch AbVerified	ClassI # Mismatch AbVerified
Patient 1 A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02	Donor 1 A*34:02, A*66:01, B*13:02, B*51:01, C*06:02, C*16:01	6	16	3	25

#of Mismatch only: Mismatchの数のみ表示

表示を戻すには再度#of Mismatch onlyをクリック

Mismatch Evaluation-1

Mismatch数のカットオフ値をマニュアルで設定
①Newをクリック
②Profile Nameを入力
③各ローカスのカットオフ値を入力
④Saveをクリック
⑤Applyをクリック


Epitope Matching
Epitope Analysis
Find
Mismatch Evaluation
Delete
Reanalyze
Search Allele(s)
Search Epitope(s)
List All Epitopes
Comment:
①
New
Rename
Delete
Apply
Save
②
③
④
Cancel
Save
⑤
New
Rename
Delete
Apply
Save
Epitope Mismatch Evaluation
HLA Fusion™
ONE LAMBDA

sample

A*24:02

151AHA

dnDSA Predictor

et al : Class II Eplet Mismatch Modulates Tacrolimus Trough Levels Required to Prevent
pecific Antibody Development. J Am Soc Nephrol 28, 2017

DR (DRB1,DRB345) 11

DQ 11

Epitope Mismatch Evaluation

Profile Name (No special characters; best keep within 50 characters)

Description

Cutoffs for Mismatched Eplets (>) (must be positive integer values) (flag as long as one cutoff is satisfied)

A, B, C, Class I Combined; DRB1, DRB345, DR (DRB1,DRB345), DQ, DP, Class II combined; MICA

○ Use Verified Eplets

● Use All Eplets (Verified as well as predicted)

Epitope Mismatch Evaluation

Profile Name: sample (No special characters; best keep within 50 characters)

Description

Cutoffs for Mismatched Eplets (>) (must be positive integer values) (flag as long as one cutoff is satisfied)

A 10

B 10

C 4

Class I Combined

DRB1

DRB345

DR (DRB1,DRB345)

DQ

DP

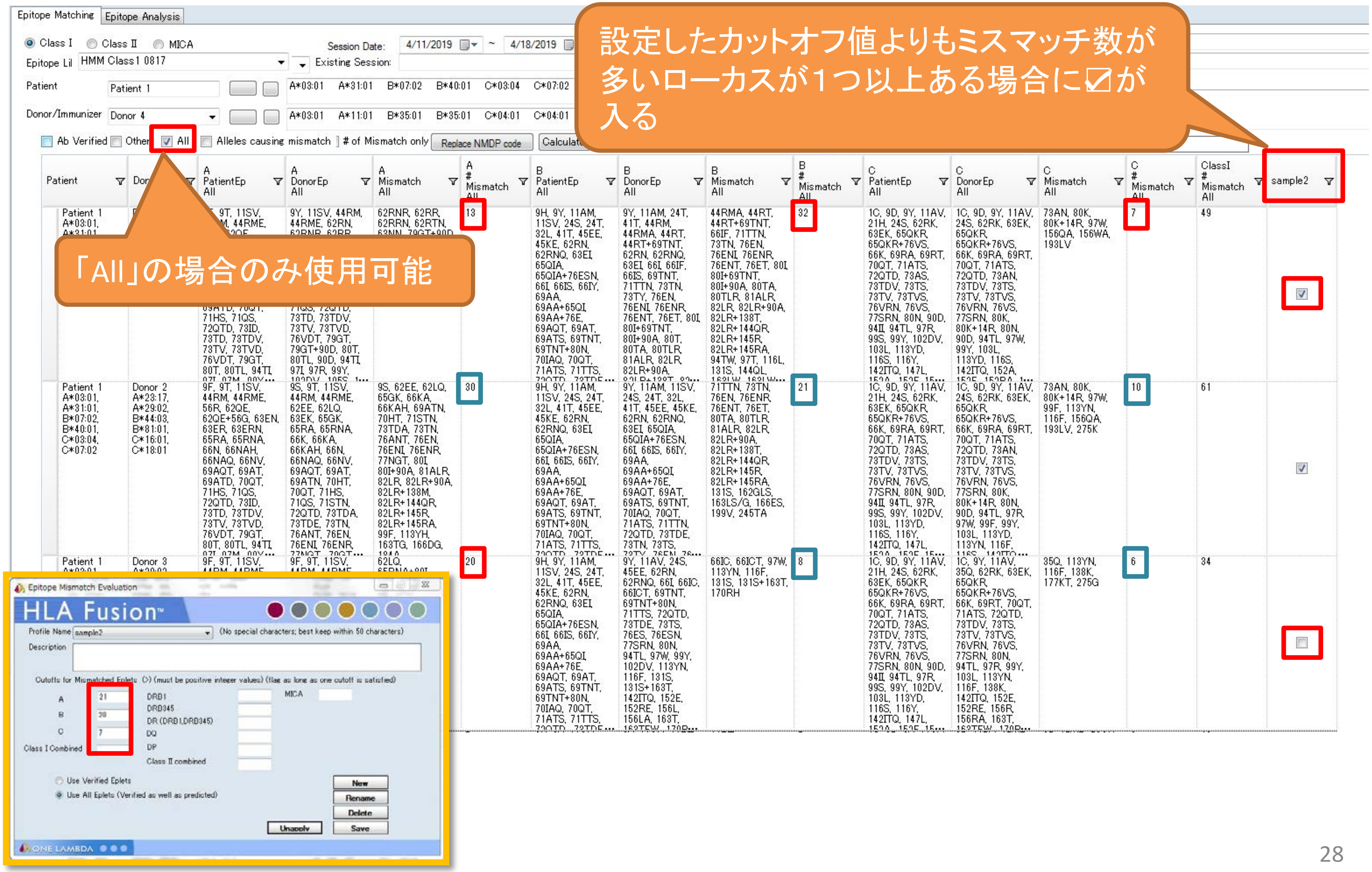
Class II combined

MICA

○ Use Verified Eplets

● Use All Eplets (Verified as well as predicted)

Mismatch Evaluation-2



● Class I ○ Class II ○ MICA

Session Date: 4/11/2019 ~ 4/18/2019

Epitope Lil: HMM Class1 0817

Existing Session:

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor/Immunizer: Donor 4 — A*03:01 A*11:01 B*35:01 B*35:01 C*04:01 C*04:01

☐ Ab Verified ☐ Other ☑ All ☐ Alleles causing mismatch ☐ # of Mismatch only

Patient	Don	A PatientEp All	A DonorEp All	A Mismatch All	A # Mismatch All	B PatientEp All	B DonorEp All	B Mismatch All	B # Mismatch All	C PatientEp All	C DonorEp All	C Mismatch All	C # Mismatch All	ClassI # Mismatch All	sample2
Patient 1 A*03:01,		9T, 11SV, M, 44RME, … 71HS, 71QS, 72QTD, 73ID, 73TD, 73TDV, 73TV, 73TVD, 76VDT, 79GT, 80T, 80TL, 94TI,	9Y, 11SV, 44RM, 44RME, 62RN, … 73TD, 73TDV, 73TV, 73TVD, 76VDT, 79GT, 79GT+90D, 80T, 80TL, 90D, 94TI, 97I, 97R, 99Y,	62RNR, 62RR, 62RRN, 62RTN,	13	9H, 9Y, 11AM, 11SV, 24S, 24T, 32L, 41T, 45EE, 45KE, 62RN, 62RNQ, 63EI, 65QIA, 65QIA+76ESN, 66I, 66IS, 66IY, 69AA, 69AA+65QI, 69AA+76E, 69AQT, 69AT, 69ATS, 69TNT, 69TNT+80N, 70IAQ, 70QT, 71ATS, 71TTS,	9Y, 11AM, 24T, 41T, 44RM, 44RMA, 44RT, 44RT+69TNT, 62RN, 62RNQ, 63EI, 66I, 66IF, 66IS, 69TNT, 71TTN, 73TN, 73TY, 76EN, 76ENI, 76ENR, 76ENT, 76ET, 80I, 80I+69TNT, 80I+90A, 80T, 80TA, 80TLR, 81ALR, 82LR, 82LR+90A,	44RMA, 44RT, 44RT+69TNT, 66IF, 71TTN, 73TN, 76EN, 76ENI, 76ENR, 76ENT, 76ET, 80I, 80I+69TNT, 80I+90A, 80TA, 80TLR, 81ALR, 82LR, 82LR+90A, 82LR+138T, 82LR+144QR, 82LR+145R, 82LR+145RA, 94TW, 97T, 116L, 131S, 144QL,	32	1C, 9D, 9Y, 11AV, 21H, 24S, 62RK, 63EK, 65QKR, 65QKR+76VS, 66K, 69RA, 69RT, 70QT, 71ATS, 72QTD, 73AS, 73TDV, 73TS, 73TV, 73TVS, 76VRN, 76VS, 77SRN, 80N, 90D, 94I, 94TL, 97R, 99S, 99Y, 102DV, 103L, 113YD, 116S, 116Y, 142ITQ, 147L,	1C, 9D, 9Y, 11AV, 24S, 62RK, 63EK, 65QKR, 65QKR+76VS, 66K, 69RA, 69RT, 70QT, 71ATS, 72QTD, 73AN, 73TDV, 73TS, 73TV, 73TVS, 76VRN, 76VS, 77SRN, 80K, 80K+14R, 80N, 90D, 94TL, 97W, 99Y, 103L, 113YD, 116S, 142ITQ, 152A,	73AN, 80K, 80K+14R, 97W, 156QA, 156WA, 193LV	7	49	☑
Patient 1 A*03:01, A*31:01, B*07:02, B*40:01, C*03:04, C*07:02	Donor 2 A*23:17, A*29:02, B*44:03, B*81:01, C*16:01, C*18:01	9F, 9T, 11SV, 44RM, 44RME, 56R, 62QE, 62QE+56G, 63EN, 63ER, 63ERN, 65RA, 65RNA, 66N, 66NAH, 66NAQ, 66NV, 69AQT, 69AT, 69ATD, 70QT, 71HS, 71QS, 72QTD, 73ID, 73TD, 73TDV, 73TV, 73TVD, 76VDT, 79GT, 80T, 80TL, 94TI,	9S, 9T, 11SV, 44RM, 44RME, 62EE, 62LQ, 63EK, 65GK, 65RA, 65RNA, 66K, 66KA, 66KAH, 66N, 66NAQ, 66NV, 69AQT, 69AT, 69ATN, 70HT, 70QT, 71HS, 71QS, 71STN, 72QTD, 73TDA, 73TDE, 73TN, 76ANT, 76EN, 76ENI, 76ENR,	9S, 62EE, 62LQ, 65GK, 66KA, 66KAH, 69ATN, 70HT, 71STN, 73TDA, 73TN, 76ANT, 76EN, 76ENI, 76ENR, 77NGT, 80I, 80I+90A, 81ALR, 82LR, 82LR+90A, 82LR+138M, 82LR+144QR, 82LR+145R, 82LR+145RA, 99F, 113YH, 163TG, 166DG,	30	9H, 9Y, 11AM, 11SV, 24S, 24T, 32L, 41T, 45EE, 45KE, 62RN, 62RNQ, 63EI, 65QIA, 65QIA+76ESN, 66I, 66IS, 66IY, 69AA, 69AA+65QI, 69AA+76E, 69AQT, 69AT, 69ATS, 69TNT, 69TNT+80N, 70IAQ, 70QT, 71ATS, 71TTS,	9Y, 11AM, 11SV, 24S, 24T, 32L, 41T, 45EE, 45KE, 62RN, 62RNQ, 63EI, 65QIA, 65QIA+76ESN, 66I, 66IS, 66IY, 69AA, 69AA+65QI, 69AA+76E, 69AQT, 69AT, 69ATS, 69TNT, 70IAQ, 70QT, 71ATS, 71TTN, 72QTD, 73TDE, 73TN, 73TS,	71TTN, 73TN, 76EN, 76ENR, 76ENT, 76ET, 80TA, 80TLR, 81ALR, 82LR, 82LR+90A, 82LR+138T, 82LR+144QR, 82LR+145R, 82LR+145RA, 131S, 162GLS, 163LS/G, 166ES, 199V, 245TA	21	1C, 9D, 9Y, 11AV, 21H, 24S, 62RK, 63EK, 65QKR, 65QKR+76VS, 66K, 69RA, 69RT, 70QT, 71ATS, 72QTD, 73AS, 73TDV, 73TS, 73TV, 73TVS, 76VRN, 76VS, 77SRN, 80N, 90D, 94I, 94TL, 97R, 99S, 99Y, 102DV, 103L, 113YD, 116S, 116Y, 142ITQ, 147L,	1C, 9D, 9Y, 11AV, 24S, 62RK, 63EK, 65QKR, 65QKR+76VS, 66K, 69RA, 69RT, 70QT, 71ATS, 72QTD, 73AN, 73TDV, 73TS, 73TV, 73TVS, 76VRN, 76VS, 77SRN, 80K, 80K+14R, 80N, 90D, 94TL, 97R, 97W, 99F, 99Y, 103L, 113YD, 113YN, 116F,	73AN, 80K, 80K+14R, 97W, 99F, 113YN, 116F, 156QA, 193LV, 275K	10	61	☑
Patient 1	Donor 3	9F, 9T, 11SV,	9F, 9T, 11SV,	62LQ,	20	9H, 9Y, 11AM, 11SV, 24S, 24T, 32L, 41T, 45EE, 45KE, 62RN, 62RNQ, 63EI, 65QIA, 65QIA+76ESN, 66I, 66IS, 66IY, 69AA, 69AA+65QI, 69AA+76E, 69AQT, 69AT, 69ATS, 69TNT, 69TNT+80N, 70IAQ, 70QT, 71ATS, 71TTS,	9Y, 11AV, 24S, 45EE, 62RN, 62RNQ, 66I, 66IC, 66ICT, 69TNT, 69TNT+80N, 71TTS, 72QTD, 73TDE, 73TS, 76ES, 76ESN, 77SRN, 80N, 94TL, 97W, 99Y, 102DV, 113YN, 116F, 131S, 131S+163T, 142ITQ, 152E, 152RE, 156L, 156LA, 163T,	66IC, 66ICT, 97W, 113YN, 116F, 131S, 131S+163T, 170RH	8	1C, 9D, 9Y, 11AV, 21H, 24S, 62RK, 63EK, 65QKR, 65QKR+76VS, 66K, 69RA, 69RT, 70QT, 71ATS, 72QTD, 73AS, 73TDV, 73TS, 73TV, 73TVS, 76VRN, 76VS, 77SRN, 80N, 90D, 94I, 94TL, 97R, 99S, 99Y, 102DV, 103L, 113YD, 116S, 116Y, 142ITQ, 147L,	1C, 9Y, 11AV, 35Q, 62RK, 63EK, 65QKR, 65QKR+76VS, 66K, 69RT, 70QT, 71ATS, 72QTD, 73TDV, 73TS, 73TV, 73TVS, 76VRN, 76VS, 77SRN, 80N, 94TL, 97R, 99Y, 103L, 113YN, 116F, 138K, 142ITQ, 152E, 152RE, 156R, 156RA, 163T,	35Q, 113YN, 116F, 138K, 177KT, 275G	6	34	☐

設定したカットオフ値よりもミスマッチ数が多いローカスが1つ以上ある場合に☑が入る

「All」の場合のみ使用可能

Epitope Mismatch Evaluation

HLA Fusion™

Profile Name: sample2 (No special characters; best keep within 50 characters)

Description:

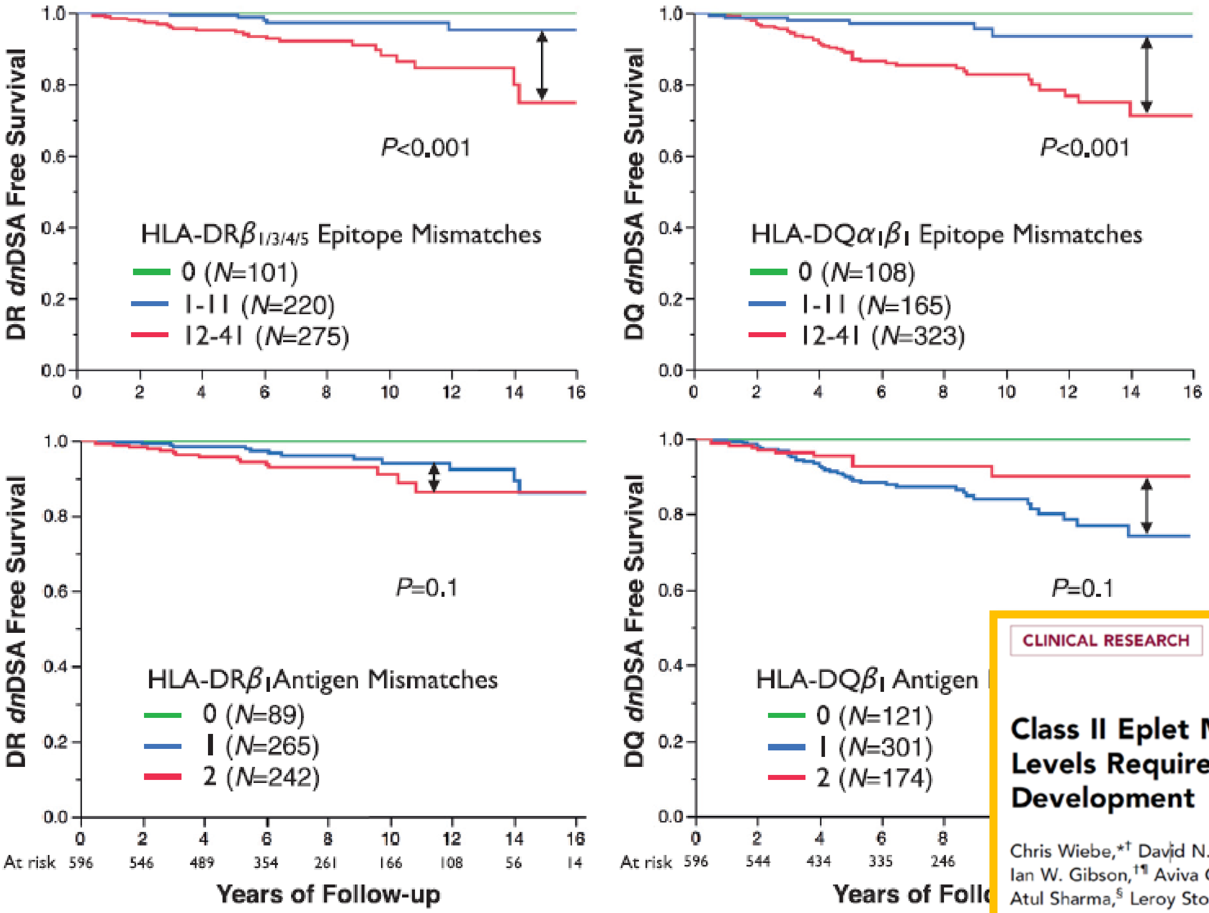
Cutoffs for Mismatched Eplets (>) (must be positive integer values) (flag as long as one cutoff is satisfied)

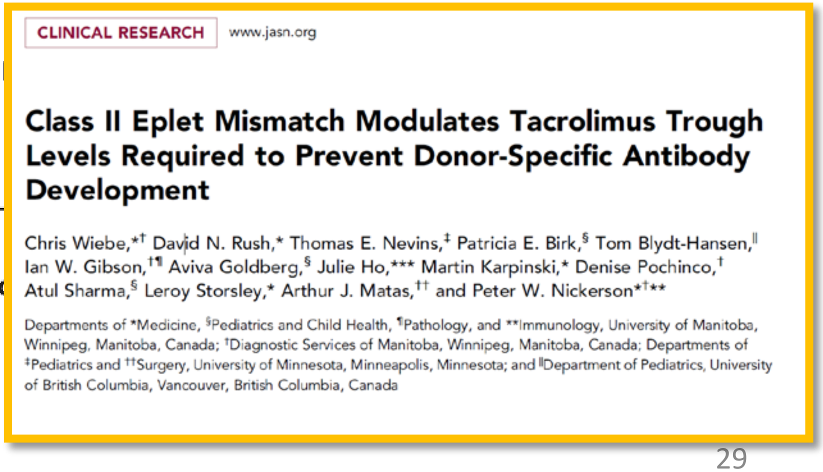
A	21	DRB1		MICA	
B	20	DRB345			
C	7	DR (DRB1,DRB345)			
Class I Combined		DQ			
		DP			
		Class II combined			

○ Use Verified Eplets

● Use All Eplets (Verified as well as predicted)

論文の紹介





CLINICAL RESEARCH www.jasn.org

Class II Eplet Mismatch Modulates Tacrolimus Trough Levels Required to Prevent Donor-Specific Antibody Development

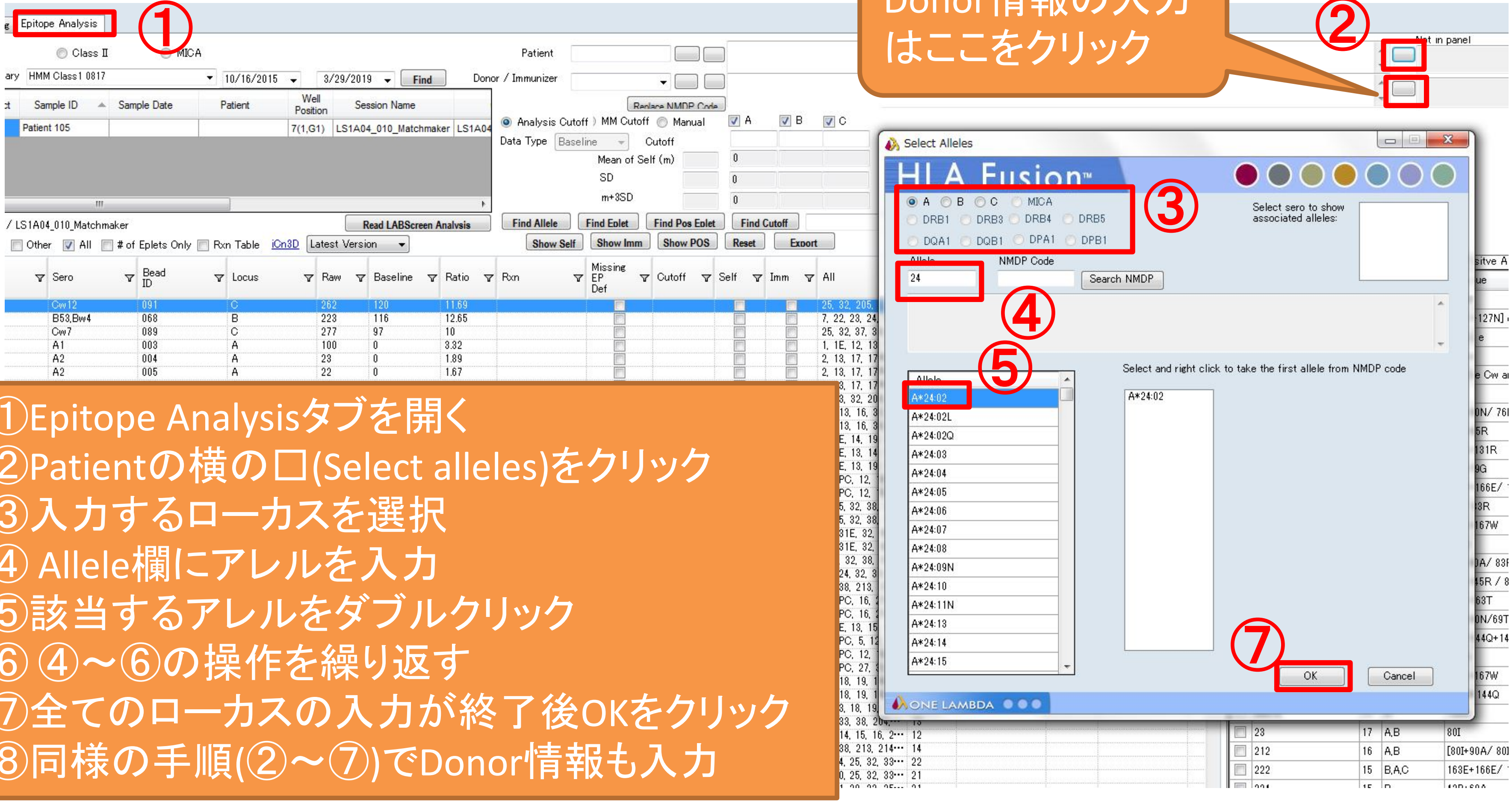
Chris Wiebe,[*†] David N. Rush,[*] Thomas E. Nevins,[‡] Patricia E. Birk,[§] Tom Blydt-Hansen,[‖] Ian W. Gibson,[†¶] Aviva Goldberg,[§] Julie Ho,[***] Martin Karpinski,[*] Denise Pochinco,[†] Atul Sharma,[§] Leroy Storsley,[*] Arthur J. Matas,[††] and Peter W. Nickerson[*†**]

Departments of [*]Medicine, [§]Pediatrics and Child Health, [¶]Pathology, and [**]Immunology, University of Manitoba, Winnipeg, Manitoba, Canada; [†]Diagnostic Services of Manitoba, Winnipeg, Manitoba, Canada; Departments of [‡]Pediatrics and [††]Surgery, University of Minnesota, Minneapolis, Minnesota; and [‖]Department of Pediatrics, University of British Columbia, Vancouver, British Columbia, Canada

Epitope Analysis

タイピング情報の入力

手入力する場合


Epitope Analysis
①
②
③
④
⑤
⑦
Patient
Donor / Immunizer
Find
Select Alleles
HLA Fusion
○ A ○ B ○ C ○ MICA
○ DRB1 ○ DRB3 ○ DRB4 ○ DRB5
○ DQA1 ○ DQB1 ○ DPA1 ○ DPB1
Allele
NMDP Code
Search NMDP
Select sero to show associated alleles:
Select and right click to take the first allele from NMDP code
OK
Cancel
ONE LAMBDA

Allele: 24

A*24:02
A*24:02L
A*24:02Q
A*24:03
A*24:04
A*24:05
A*24:06
A*24:07
A*24:08
A*24:09N
A*24:10
A*24:11N
A*24:13
A*24:14
A*24:15

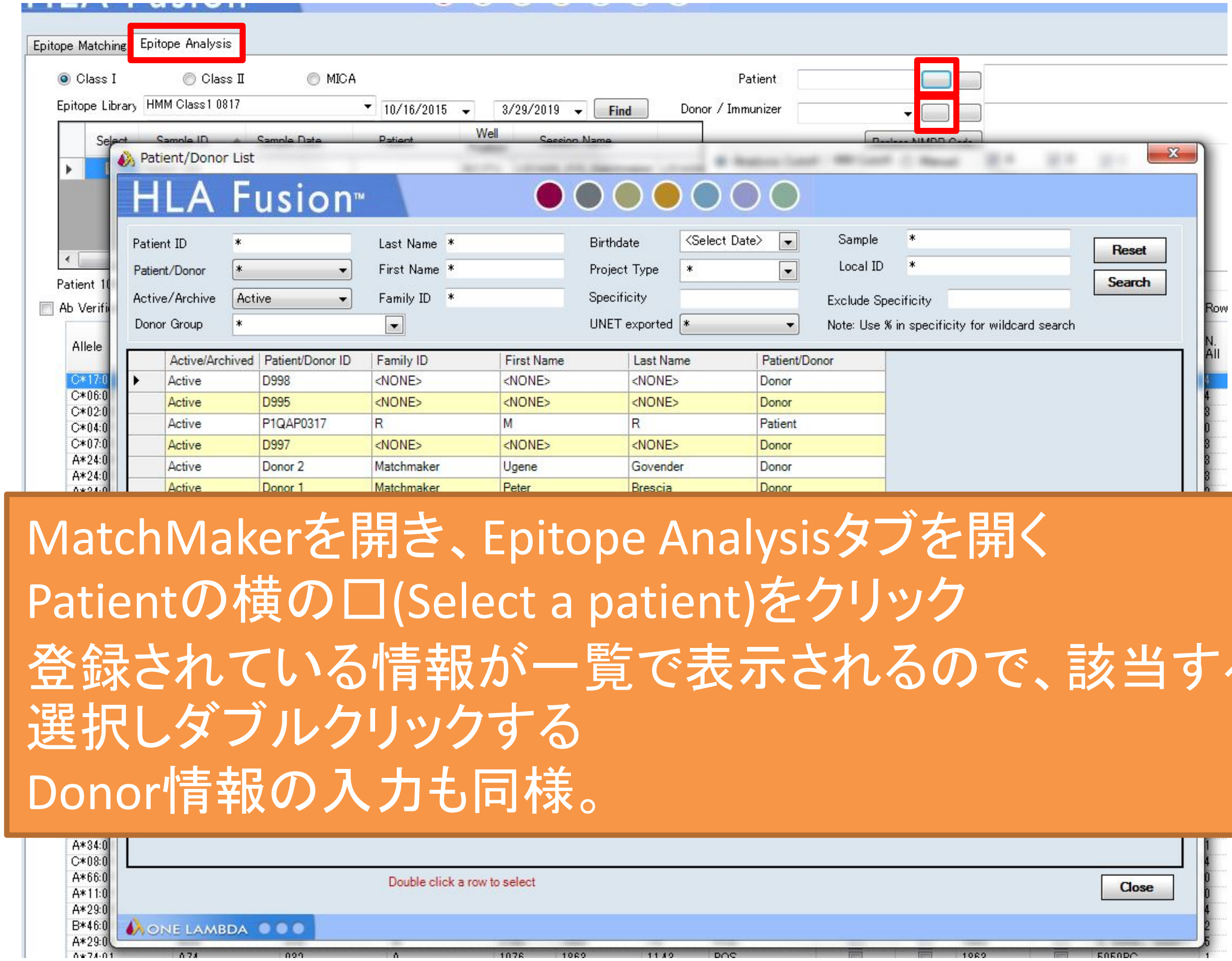
A*24:02

Donor情報の入力
はここをクリック

①Epitope Analysisタブを開く
②Patientの横の□(Select alleles)をクリック
③入力するローカスを選択
④ Allele欄にアレルを入力
⑤該当するアレルをダブルクリック
⑥ ④～⑥の操作を繰り返す
⑦全てのローカスの入力が終了後OKをクリック
⑧同様の手順(②～⑦)でDonor情報も入力

タイピング情報の入力

HLA Fusionのデータベースより呼び出す場合



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 10/16/2015 | 3/29/2019

Patient

Donor / Immunizer

Patient/Donor List

Patient ID: *

Last Name: *

Birthdate: <Select Date>

Sample: *

Patient/Donor: *

First Name: *

Project Type: *

Local ID: *

Active/Archive: Active

Family ID: *

Specificity:

Exclude Specificity:

Donor Group: *

UNET exported: *

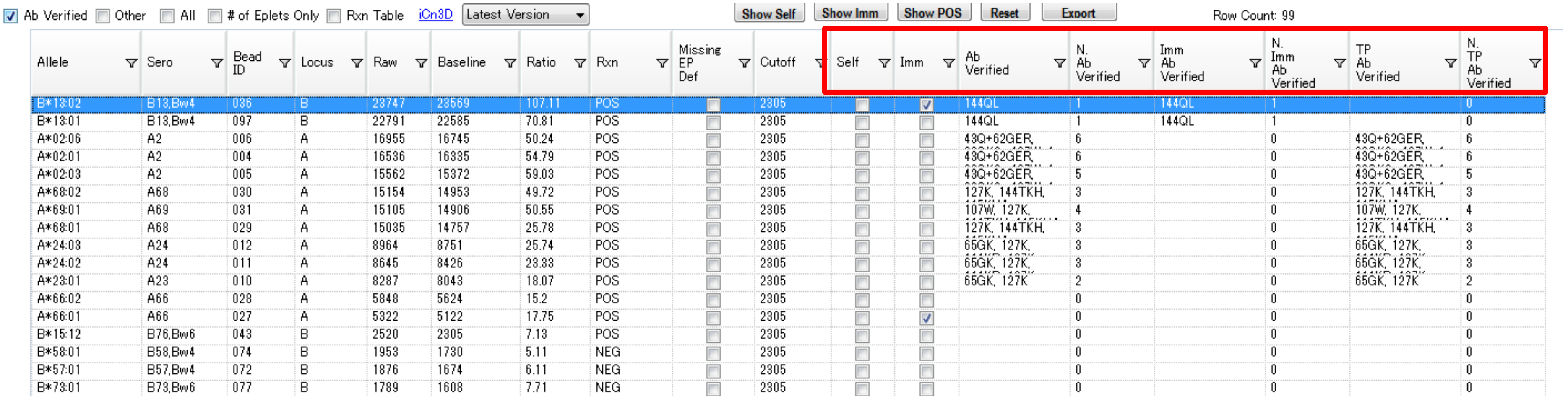
Note: Use % in specificity for wildcard search

Active/Archived	Patient/Donor ID	Family ID	First Name	Last Name	Patient/Donor
Active	D998	<NONE>	<NONE>	<NONE>	Donor
Active	D995	<NONE>	<NONE>	<NONE>	Donor
Active	P1QAP0317	R	M	R	Patient
Active	D997	<NONE>	<NONE>	<NONE>	Donor
Active	Donor 2	Matchmaker	Ugene	Govender	Donor
Active	Donor 1	Matchmaker	Peter	Brescia	Donor

Double click a row to select

MatchMakerを開き、Epitope Analysisタブを開く
Patientの横の□(Select a patient)をクリック
登録されている情報が一覧で表示されるので、該当する情報を選択しダブルクリックする
Donor情報の入力も同様。

解析結果画面の表示-1

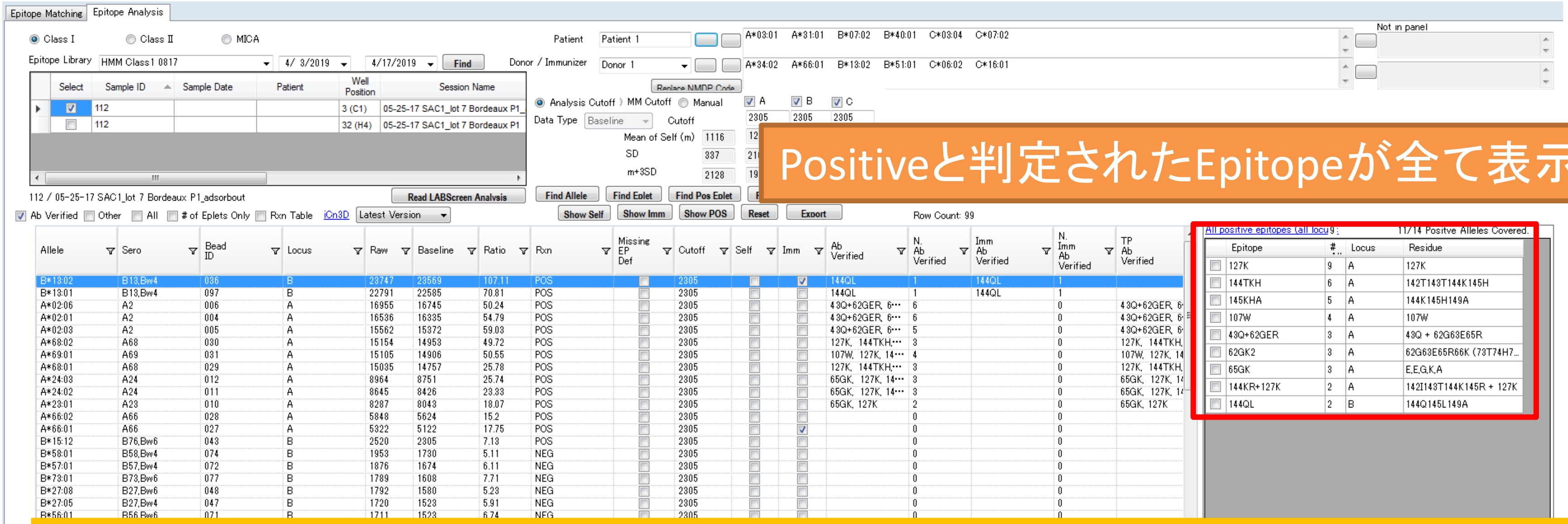

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version
Show Self
Show Imm
Show POS
Reset
Export

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified	TP Ab Verified	N. TP Ab Verified
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☑	144QL	1	144QL	1		0
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	144QL	1	144QL	1		0
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER,	6		0	43Q+62GER,	6
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER,	6		0	43Q+62GER,	6
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER,	5		0	43Q+62GER,	5
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	127K, 144TKH,	3		0	127K, 144TKH,	3
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	107W, 127K,	4		0	107W, 127K,	4
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305	☐	☐	127K, 144TKH,	3		0	127K, 144TKH,	3
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305	☐	☐	65GK, 127K,	3		0	65GK, 127K,	3
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	2305	☐	☐	65GK, 127K,	3		0	65GK, 127K,	3
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	2305	☐	☐	65GK, 127K	2		0	65GK, 127K	2
A*66:02	A66	028	A	5848	5624	15.2	POS	☐	2305	☐	☐		0		0		0
A*66:01	A66	027	A	5322	5122	17.75	POS	☐	2305	☐	☑		0		0		0
B*15:12	B76,Bw6	043	B	2520	2305	7.13	POS	☐	2305	☐	☐		0		0		0
B*58:01	B58,Bw4	074	B	1953	1730	5.11	NEG	☐	2305	☐	☐		0		0		0
B*57:01	B57,Bw4	072	B	1876	1674	6.11	NEG	☐	2305	☐	☐		0		0		0
B*73:01	B73,Bw6	077	B	1789	1608	7.71	NEG	☐	2305	☐	☐		0		0		0

Self: Patientのアレルにチェックがつきます(タイピング結果を入力している場合)
Imm: Donorのアレルにチェックがつきます(タイピング結果を入力している場合)
Ab Verified: LABScreen Single Antigenで確認されたEpitope
N. Ab Verified: Ab VerifiedのEpitopeの数
Imm Ab Verified: ドナー由来と考えられるAb Verified
N. Imm Ab Verified: ドナー由来と考えられるAb VerifiedのEpitopeの数
TP Ab Verified: Third PartyのAb Verified
N. TP Ab Verified: Third PartyのAb Verifiedの数

解析結果画面の表示-2



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 4/ 3/2019 | 4/17/2019

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

Not in panel

Select	Sample ID	Sample Date	Patient	Well Position	Session Name
☑	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_
☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1

● Analysis Cutoff ○ MM Cutoff ○ Manual ☑ A ☑ B ☑ C

Data Type: Baseline

		A	B	C
Cutoff		2305	2305	2305
Mean of Self (m)	1116	12		
SD	337	21		
m+3SD	2128	19		

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

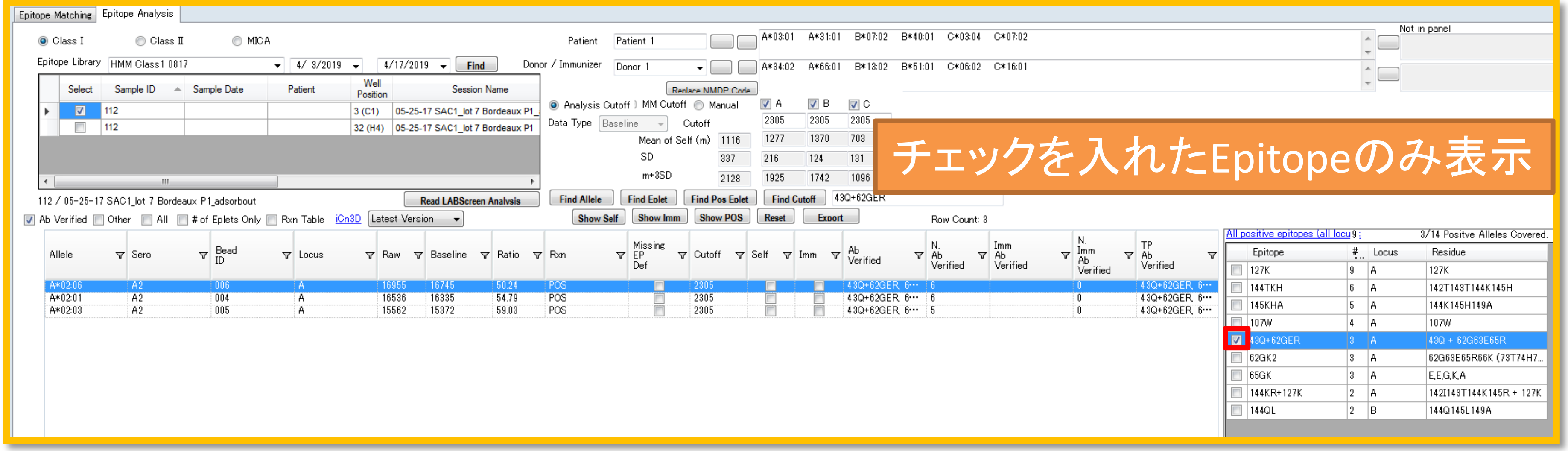
Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified	TP Ab Verified
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☑	144QL	1	144QL	1	
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	144QL	1	144QL	1	
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER, 6···	6		0	43Q+62GER, 6
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER, 6···	6		0	43Q+62GER, 6
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER, 6···	5		0	43Q+62GER, 6
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	127K, 144TKH,···	3		0	127K, 144TKH,
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	107W, 127K, 14···	4		0	107W, 127K, 14
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305	☐	☐	127K, 144TKH,···	3		0	127K, 144TKH,
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305	☐	☐	65GK, 127K, 14···	3		0	65GK, 127K, 14
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	2305	☐	☐	65GK, 127K, 14···	3		0	65GK, 127K, 14
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	2305	☐	☐	65GK, 127K	2		0	65GK, 127K
A*66:02	A66	028	A	5848	5624	15.2	POS	☐	2305	☐	☐		0		0	
A*66:01	A66	027	A	5322	5122	17.75	POS	☐	2305	☐	☑		0		0	
B*15:12	B76,Bw6	043	B	2520	2305	7.13	POS	☐	2305	☐	☐		0		0	
B*58:01	B58,Bw4	074	B	1953	1730	5.11	NEG	☐	2305	☐	☐		0		0	
B*57:01	B57,Bw4	072	B	1876	1674	6.11	NEG	☐	2305	☐	☐		0		0	
B*73:01	B73,Bw6	077	B	1789	1608	7.71	NEG	☐	2305	☐	☐		0		0	
B*27:08	B27,Bw6	048	B	1792	1580	5.23	NEG	☐	2305	☐	☐		0		0	
B*27:05	B27,Bw4	047	B	1720	1523	5.91	NEG	☐	2305	☐	☐		0		0	
B*56:01	B56,Bw6	071	B	1711	1523	6.74	NEG	☐	2305	☐	☐		0		0	

All positive epitopes (all locu 9 : 11/14 Positve Alleles Covered.

	Epitope	#…	Locus	Residue
☐	127K	9	A	127K
☐	144TKH	6	A	142T143T144K145H
☐	145KHA	5	A	144K145H149A
☐	107W	4	A	107W
☐	43Q+62GER	3	A	43Q + 62G63E65R
☐	62GK2	3	A	62G63E65R66K (73T74H7…
☐	65GK	3	A	E,E,G,K,A
☐	144KR+127K	2	A	142I143T144K145R + 127K
☐	144QL	2	B	144Q145L149A

Positiveと判定されたEpitopeが全て表示



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 4/ 3/2019 | 4/17/2019

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

Not in panel

Select	Sample ID	Sample Date	Patient	Well Position	Session Name
☑	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_
☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1

● Analysis Cutoff ○ MM Cutoff ○ Manual ☑ A ☑ B ☑ C

Data Type: Baseline

		A	B	C
Cutoff		2305	2305	2305
Mean of Self (m)	1116	1277	1370	703
SD	337	216	124	131
m+3SD	2128	1925	1742	1096

43Q+62GER

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

Row Count: 3

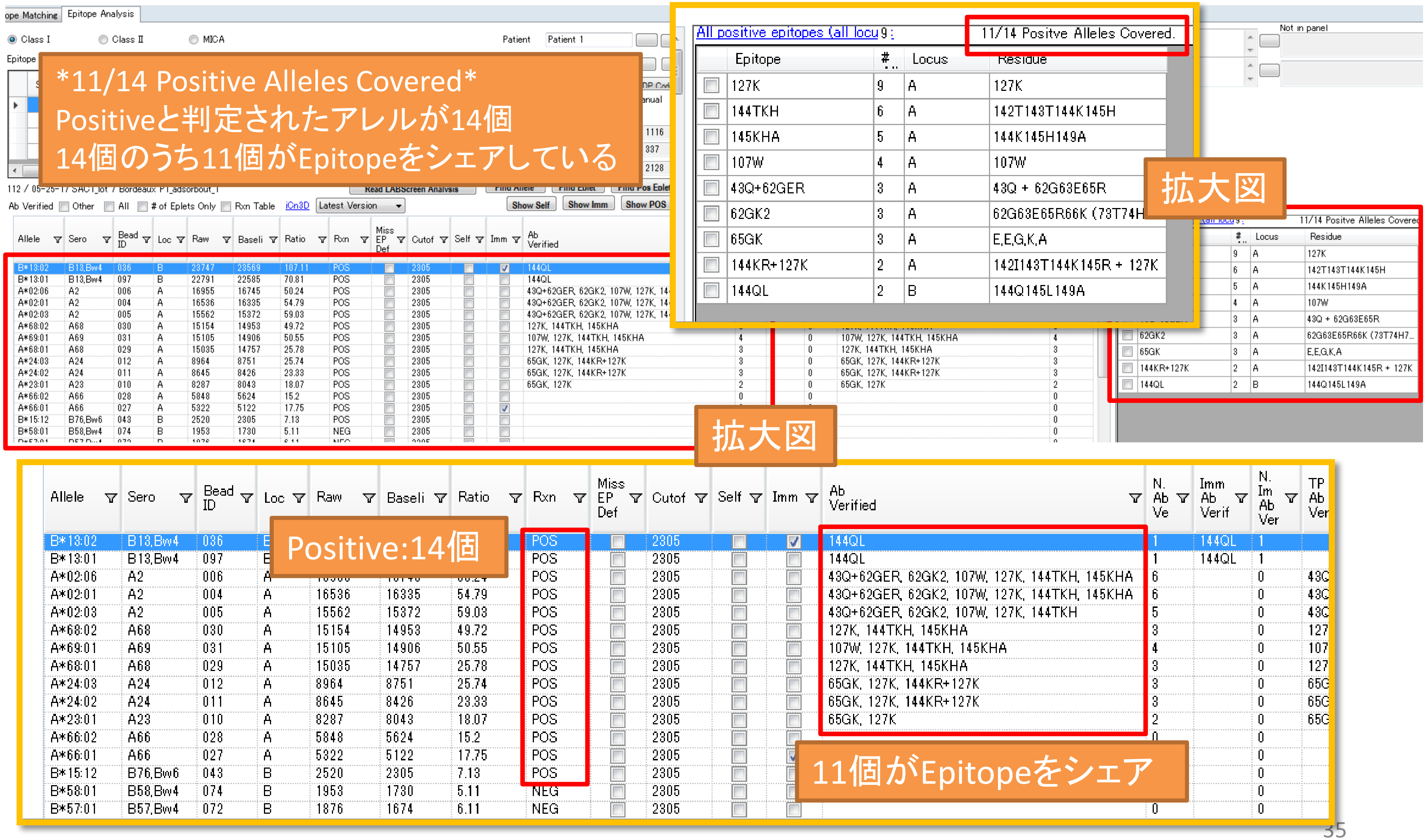
Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified	TP Ab Verified
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER, 6···	6		0	43Q+62GER, 6···
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER, 6···	6		0	43Q+62GER, 6···
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER, 6···	5		0	43Q+62GER, 6···

All positive epitopes (all locu 9 : 3/14 Positve Alleles Covered.

	Epitope	#…	Locus	Residue
☐	127K	9	A	127K
☐	144TKH	6	A	142T143T144K145H
☐	145KHA	5	A	144K145H149A
☐	107W	4	A	107W
☑	43Q+62GER	3	A	43Q + 62G63E65R
☐	62GK2	3	A	62G63E65R66K (73T74H7…
☐	65GK	3	A	E,E,G,K,A
☐	144KR+127K	2	A	142I143T144K145R + 127K
☐	144QL	2	B	144Q145L149A

チェックを入れたEpitopeのみ表示

Positive Alleles Covered


ope Matching
Epitope Analysis
○ Class I
○ Class II
○ MICA
Patient
Patient 1
Epitope
DP Cod
anual
1116
337
2128
112 / 05-25-17 SAC1_lot / Bordeaux P1_adsorbout_1
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table
iCn3D
Latest Version
Show Self
Show Imm
Show POS
Not in panel
拡大図
拡大図

11/14 Positive Alleles Covered
Positiveと判定されたアレルが14個
14個のうち11個がEpitopeをシェアしている

All positive epitopes (all locu 9 :

11/14 Positve Alleles Covered.

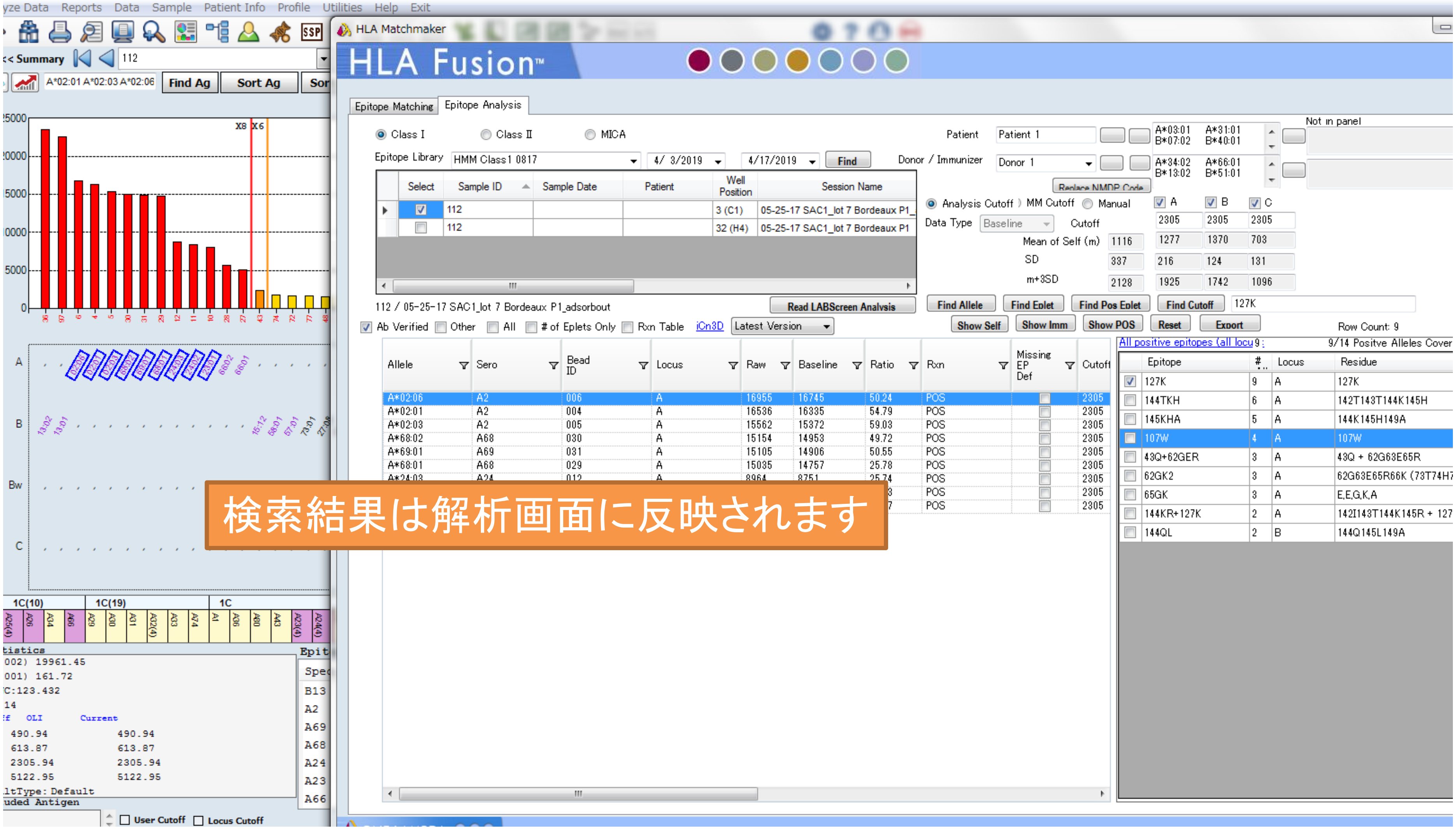
	Epitope	#.	Locus	Residue
☐	127K	9	A	127K
☐	144TKH	6	A	142T143T144K145H
☐	145KHA	5	A	144K145H149A
☐	107W	4	A	107W
☐	43Q+62GER	3	A	43Q + 62G63E65R
☐	62GK2	3	A	62G63E65R66K (73T74H7…
☐	65GK	3	A	E,E,G,K,A
☐	144KR+127K	2	A	142I143T144K145R + 127K
☐	144QL	2	B	144Q145L149A

Positive:14個

Allele	Sero	Bead ID	Loc	Raw	Baseli	Ratio	Rxn	Miss EP Def	Cutof	Self	Imm	Ab Verified	N. Ab Ve	Imm Ab Verif	N. Im Ab Ver	TP Ab Ver
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☑	144QL	1	144QL	1	
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	144QL	1	144QL	1	
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 145KHA	6		0	43
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 145KHA	6		0	43
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH	5		0	43
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	127K, 144TKH, 145KHA	3		0	127
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	107W, 127K, 144TKH, 145KHA	4		0	107
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305	☐	☐	127K, 144TKH, 145KHA	3		0	127
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305	☐	☐	65GK, 127K, 144KR+127K	3		0	65G
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	2305	☐	☐	65GK, 127K, 144KR+127K	3		0	65G
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	2305	☐	☐	65GK, 127K	2		0	65G
A*66:02	A66	028	A	5848	5624	15.2	POS	☐	2305	☐	☐		0		0	
A*66:01	A66	027	A	5322	5122	17.75	POS	☐	2305	☐	☑				0	
B*15:12	B76,Bw6	043	B	2520	2305	7.13	POS	☐	2305	☐	☐				0	
B*58:01	B58,Bw4	074	B	1953	1730	5.11	NEG	☐	2305	☐	☐				0	
B*57:01	B57,Bw4	072	B	1876	1674	6.11	NEG	☐	2305	☐	☐		0		0	

11個がEpitopeをシェア

画面の表示


HLA Matchmaker
HLA Fusion™
Epitope Matching
Epitope Analysis
Find Ag
Sort Ag
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
Replace NMDP Code
Find

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 4/ 3/2019 4/17/2019

Select	Sample ID	Sample Date	Patient	Well Position	Session Name
☑	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_
☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01

Not in panel

● Analysis Cutoff ○ MM Cutoff ○ Manual ☑ A ☑ B ☑ C

Data Type: Baseline

		A	B	C
Cutoff		2305	2305	2305
Mean of Self (m)	1116	1277	1370	703
SD	337	216	124	131
m+3SD	2128	1925	1742	1096

127K

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305
						3	POS	☐	2305
						7	POS	☐	2305

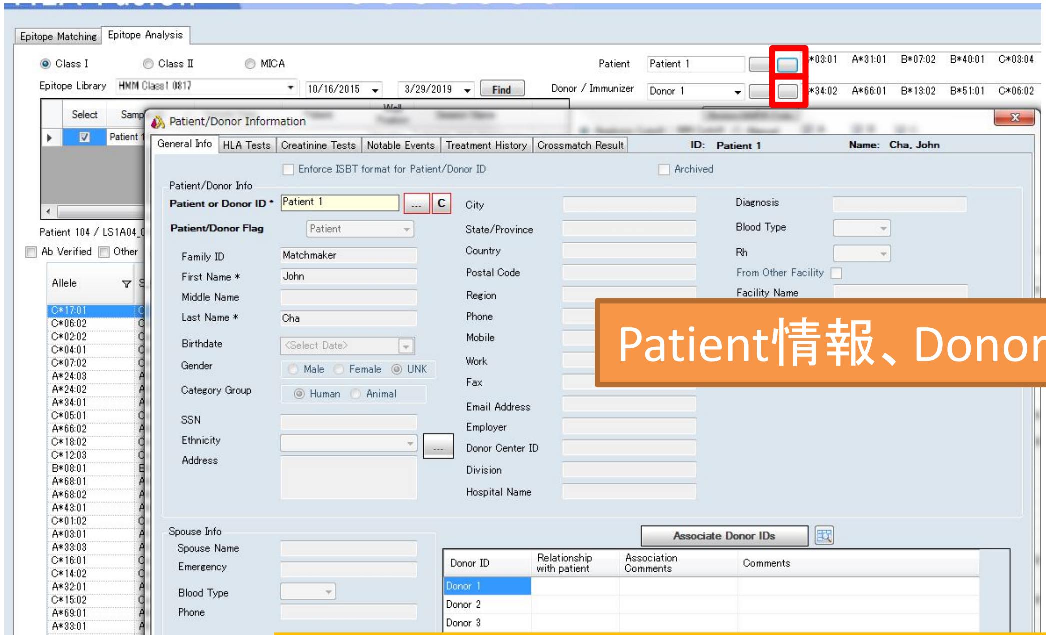
Row Count: 9

All positive epitopes (all locu 9 : 9/14 Positve Alleles Cover

	Epitope	#	Locus	Residue
☑	127K	9	A	127K
☐	144TKH	6	A	142T143T144K145H
☐	145KHA	5	A	144K145H149A
☐	107W	4	A	107W
☐	43Q+62GER	3	A	43Q + 62G63E65R
☐	62GK2	3	A	62G63E65R66K (73T74H7
☐	65GK	3	A	E,E,G,K,A
☐	144KR+127K	2	A	142I143T144K145R + 127
☐	144QL	2	B	144Q145L149A

検索結果は解析画面に反映されます

Patient及びDonor情報の編集



Epitope Matching | Epitope Analysis

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class I 0817 | 10/16/2015 | 3/29/2019 | Find

Patient: Patient 1 | *03:01 A*31:01 B*07:02 B*40:01 C*03:04

Donor / Immunizer: Donor 1 | *34:02 A*66:01 B*13:02 B*51:01 C*06:02

Patient/Donor Information

General Info
HLA Tests
Creatinine Tests
Notable Events
Treatment History
Crossmatch Result

ID: Patient 1 Name: Cha, John

☐ Enforce ISBT format for Patient/Donor ID ☐ Archived

Patient/Donor Info

Patient or Donor ID *: Patient 1

Patient/Donor Flag: Patient

Family ID: Matchmaker

First Name *: John

Middle Name:

Last Name *: Cha

Birthdate: <Select Date>

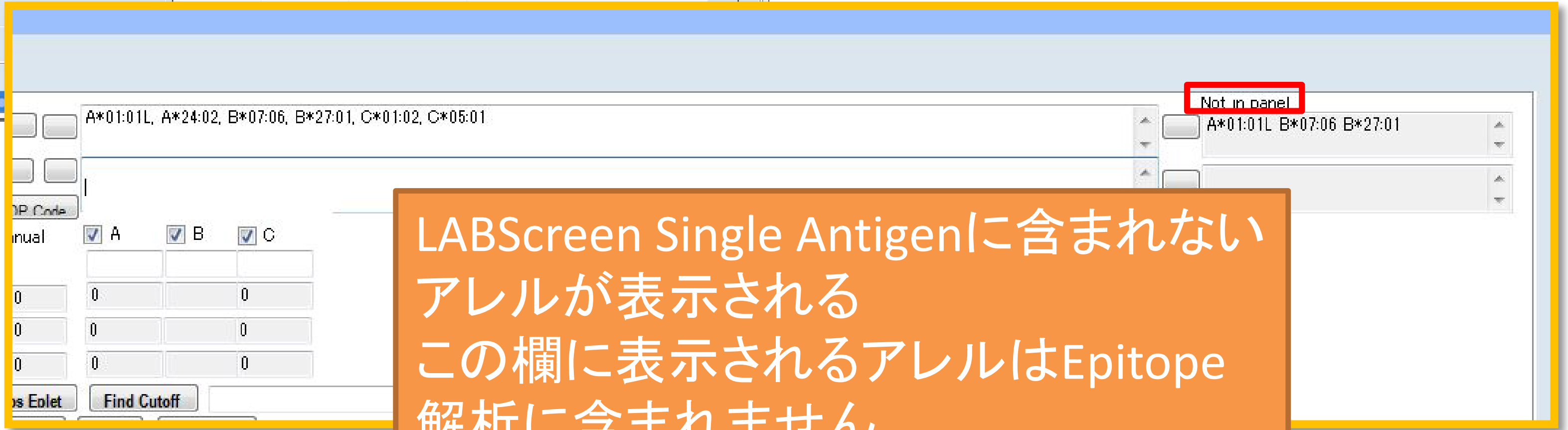
Gender: ○ Male ○ Female ● UNK

Category Group: ● Human ○ Animal

SSN
Ethnicity
Address
City
State/Province
Country
Postal Code
Region
Phone
Mobile
Work
Fax
Email Address
Employer
Donor Center ID
Division
Hospital Name
Diagnosis
Blood Type
Rh
From Other Facility
Facility Name
Spouse Info
Spouse Name
Emergency
Blood Type
Phone
Associate Donor IDs
Edit / Update
ONE LAMBDA

Donor ID	Relationship with patient	Association Comments	Comments
Donor 1			
Donor 2			
Donor 3			

Patient情報、Donor情報の閲覧、編集ができる



A*01:01L, A*24:02, B*07:06, B*27:01, C*01:02, C*05:01

Not in panel

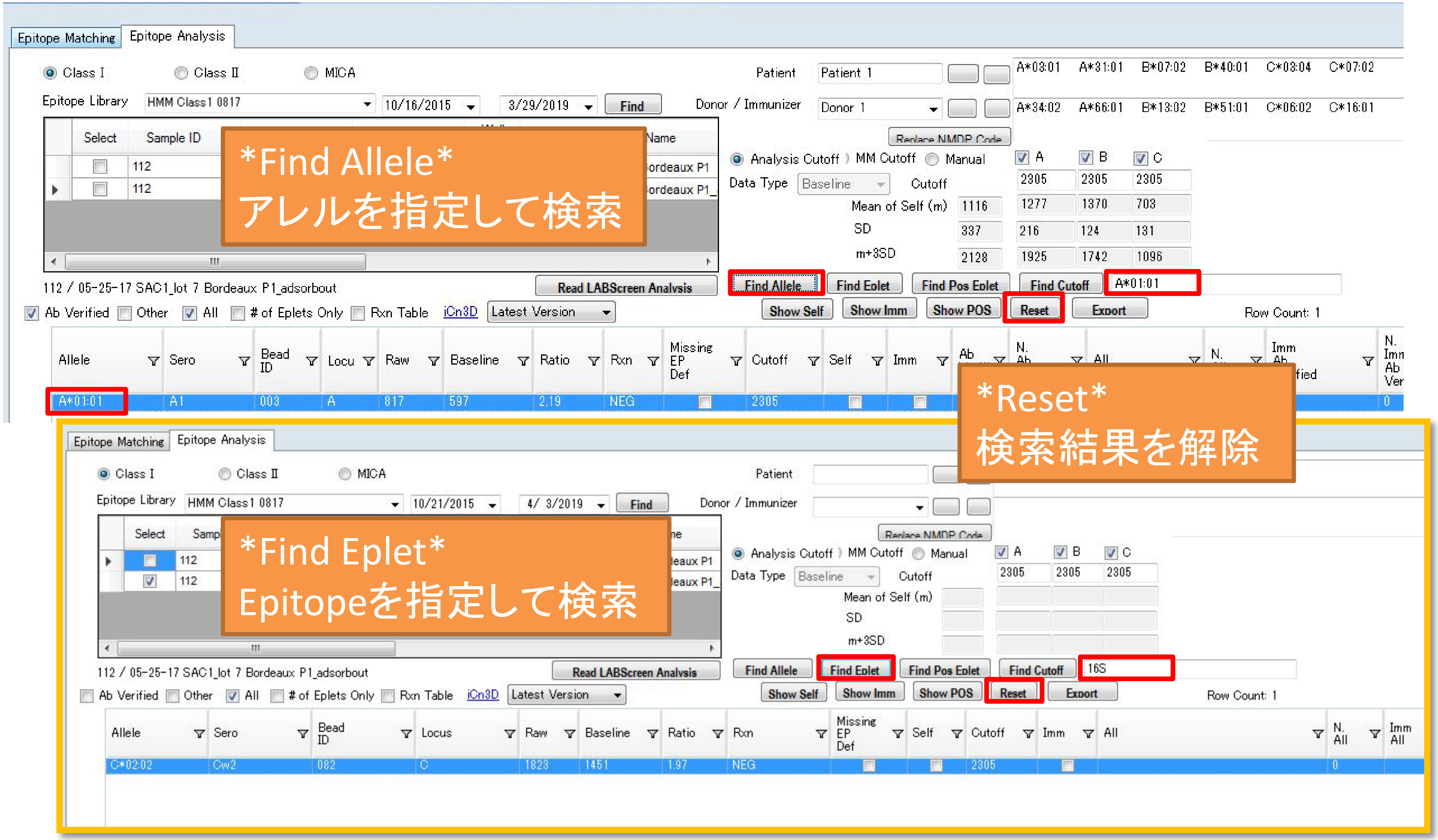
A*01:01L B*07:06 B*27:01

☑ A ☑ B ☑ C

Find Cutoff

LABScreen Single Antigenに含まれないアレルが表示される
この欄に表示されるアレルはEpitope解析に含まれません

Find Allele, Find Eplet


Epitope Matching
Epitope Analysis
Find
Replace NMDP Code
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
iCn3D

Find Allele
アレルを指定して検索

Reset
検索結果を解除

Find Eplet
Epitopeを指定して検索

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 10/16/2015 3/29/2019

Patient: Patient 1

Donor / Immunizer: Donor 1

A*03:01	A*31:01	B*07:02	B*40:01	C*03:04	C*07:02
A*34:02	A*66:01	B*13:02	B*51:01	C*06:02	C*16:01

Select	Sample ID	Name
☐	112	Bordeaux P1
☐	112	Bordeaux P1_

● Analysis Cutoff ○ MM Cutoff ○ Manual

Data Type: Baseline

		☑ A	☑ B	☑ C
Cutoff		2305	2305	2305
Mean of Self (m)	1116	1277	1370	703
SD	337	216	124	131
m+3SD	2128	1925	1742	1096

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

Find Cutoff: A*01:01

☑ Ab Verified ☐ Other ☑ All ☐ # of Eplets Only ☐ Rxn Table Latest Version

Row Count: 1

Allele	Sero	Bead ID	Locu	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm
A*01:01	A1	003	A	817	597	2.19	NEG	☐	2305	☐	☐

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 10/21/2015 4/ 3/2019

Select	Sample ID	Name
☐	112	Bordeaux P1
☑	112	Bordeaux P1_

● Analysis Cutoff ○ MM Cutoff ○ Manual

Data Type: Baseline

	☑ A	☑ B	☑ C
Cutoff	2305	2305	2305

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

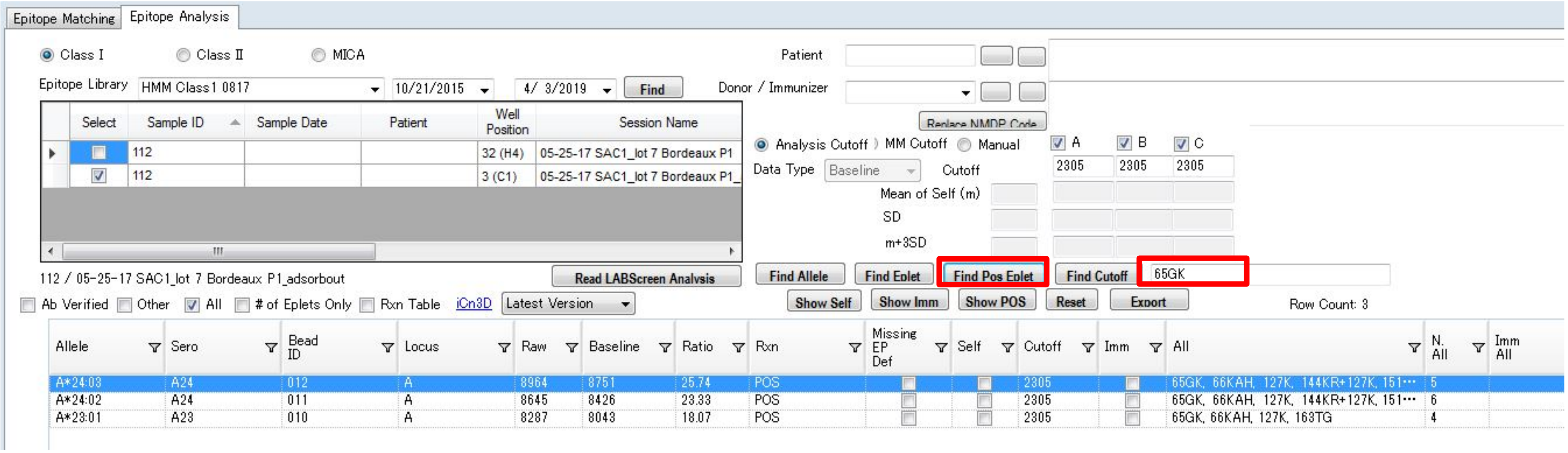
Find Cutoff: 16S

☐ Ab Verified ☐ Other ☑ All ☐ # of Eplets Only ☐ Rxn Table Latest Version

Row Count: 1

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Self	Cutoff	Imm	All	N. All	Imm All
C*02:02	Cw2	082	C	1823	1451	1.97	NEG	☐	☐	2305	☐		0	

Find Pos Eplet


Epitope Matching
Epitope Analysis
Find
Replace NMDP Code
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
iCn3D

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 — 10/21/2015 — 4/ 3/2019

Patient:

Donor / Immunizer:

Select	Sample ID	Sample Date	Patient	Well Position	Session Name
☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1
☑	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_

● Analysis Cutoff ○ MM Cutoff ○ Manual

Data Type: Baseline

	☑ A	☑ B	☑ C
Cutoff	2305	2305	2305
Mean of Self (m)			
SD			
m+3SD			

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

Find Cutoff: 65GK

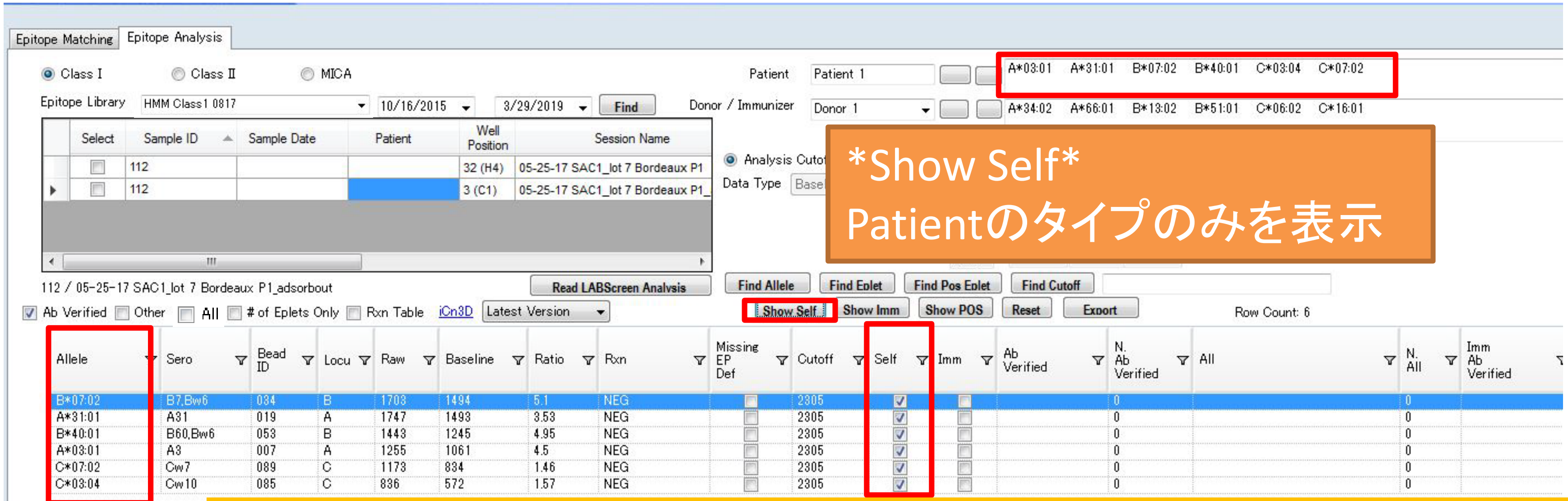
☐ Ab Verified ☐ Other ☑ All ☐ # of Eplets Only ☐ Rxn Table — Latest Version

Row Count: 3

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Self	Cutoff	Imm	All	N. All	Imm All
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	☐	2305	☐	65GK, 66KAH, 127K, 144KR+127K, 151···	5	
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	☐	2305	☐	65GK, 66KAH, 127K, 144KR+127K, 151···	6	
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	☐	2305	☐	65GK, 66KAH, 127K, 163TG	4	

Find Pos Eplet
Positiveアレルの中からEpitopeを指定して検索

Show Self, Show Imm



Show Self
Patientのタイプのみを表示

Epitope Matching
Epitope Analysis
● Class I
○ Class II
○ MICA
Find
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export

Epitope Library: HMM Class1 0817 | 10/16/2015 | 3/29/2019

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

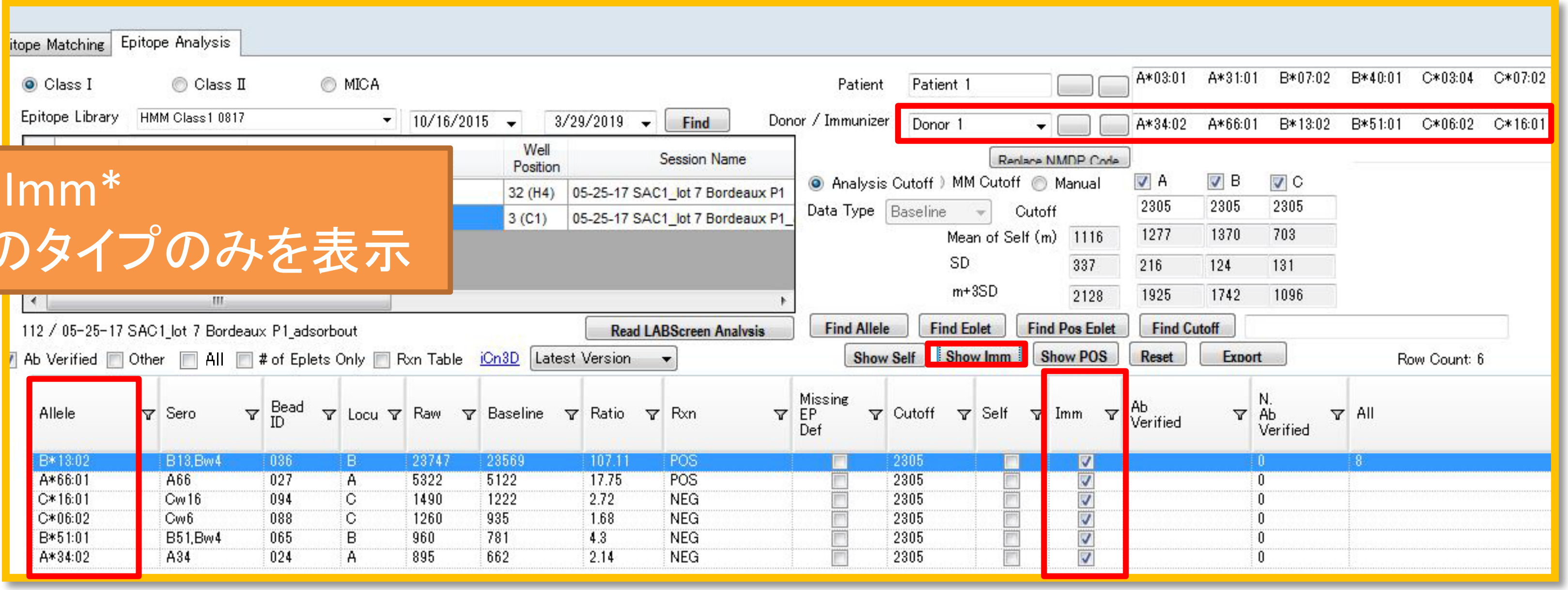
Select	Sample ID	Sample Date	Patient	Well Position	Session Name
☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1
☐	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

Row Count: 6

Allele	Sero	Bead ID	Locu	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	All	N. All	Imm Ab Verified
B*07:02	B7,Bw6	034	B	1703	1494	5.1	NEG	☐	2305	☑	☐		0		0	
A*31:01	A31	019	A	1747	1493	3.53	NEG	☐	2305	☑	☐		0		0	
B*40:01	B60,Bw6	053	B	1443	1245	4.95	NEG	☐	2305	☑	☐		0		0	
A*03:01	A3	007	A	1255	1061	4.5	NEG	☐	2305	☑	☐		0		0	
C*07:02	Cw7	089	C	1173	834	1.46	NEG	☐	2305	☑	☐		0		0	
C*03:04	Cw10	085	C	836	572	1.57	NEG	☐	2305	☑	☐		0		0	



Show Imm
Donorのタイプのみを表示

itope Matching
Epitope Analysis
● Class I
○ Class II
○ MICA
Find
Replace NMDP Code
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export

Epitope Library: HMM Class1 0817 | 10/16/2015 | 3/29/2019

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

● Analysis Cutoff ○ MM Cutoff ○ Manual

Data Type: Baseline

		☑ A	☑ B	☑ C
Cutoff		2305	2305	2305
Mean of Self (m)	1116	1277	1370	703
SD	337	216	124	131
m+3SD	2128	1925	1742	1096

Well Position	Session Name
32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1
3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_

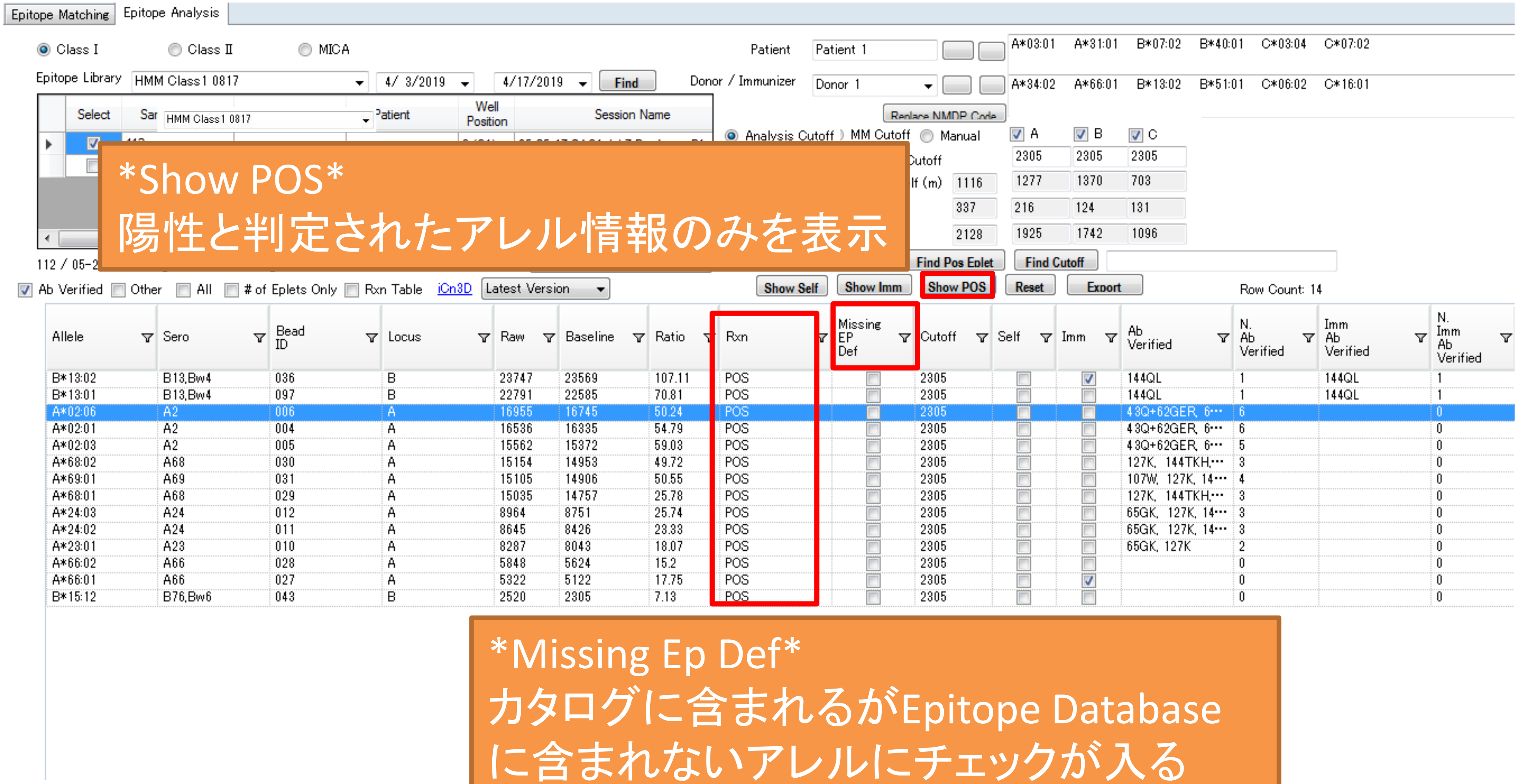
112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

Row Count: 6

Allele	Sero	Bead ID	Locu	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	All
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☑		0	8
A*66:01	A66	027	A	5322	5122	17.75	POS	☐	2305	☐	☑		0	
C*16:01	Cw16	094	C	1490	1222	2.72	NEG	☐	2305	☐	☑		0	
C*06:02	Cw6	088	C	1260	935	1.68	NEG	☐	2305	☐	☑		0	
B*51:01	B51,Bw4	065	B	960	781	4.3	NEG	☐	2305	☐	☑		0	
A*34:02	A34	024	A	895	662	2.14	NEG	☐	2305	☐	☑		0	

Show POS, Missing Ep Def



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 — 4/ 3/2019 — 4/17/2019

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

● Analysis Cutoff) MM Cutoff ○ Manual — ☑ A ☑ B ☑ C

		A	B	C
Cutoff		2305	2305	2305
lf (m)	1116	1277	1370	703
	337	216	124	131
	2128	1925	1742	1096

112 / 05-2

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table — Latest Version

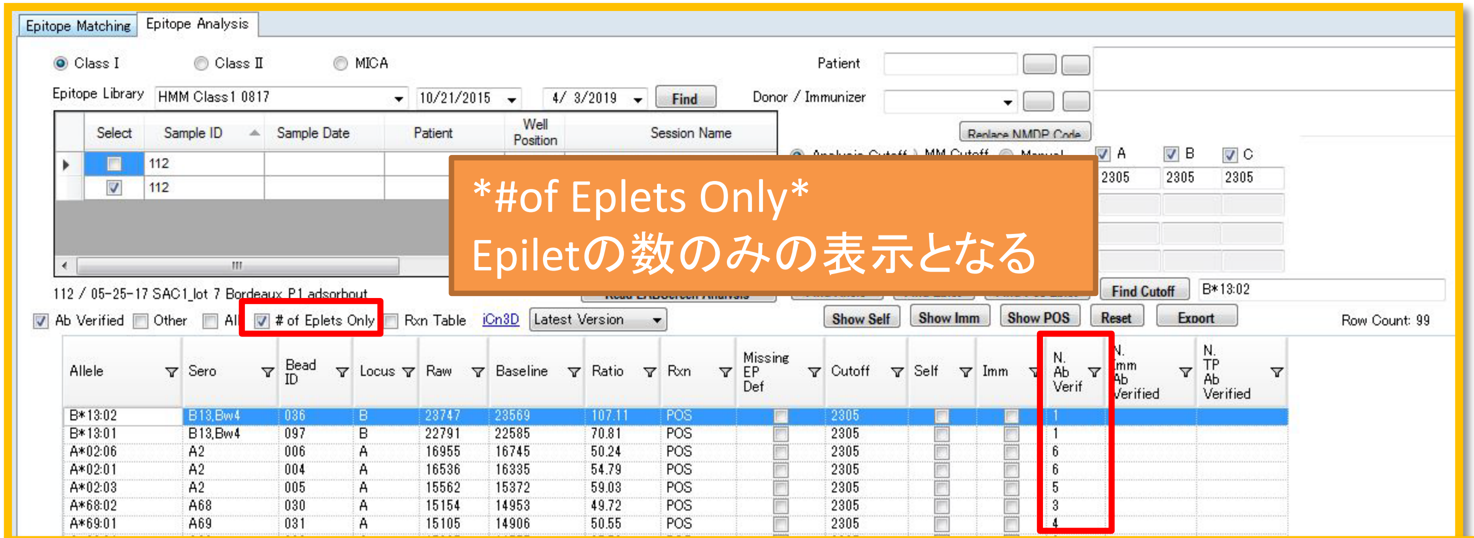
Row Count: 14

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☑	144QL	1	144QL	1
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	144QL	1	144QL	1
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER, 6…	6		0
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER, 6…	6		0
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER, 6…	5		0
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	127K, 144TKH,…	3		0
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	107W, 127K, 14…	4		0
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305	☐	☐	127K, 144TKH,…	3		0
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305	☐	☐	65GK, 127K, 14…	3		0
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	2305	☐	☐	65GK, 127K, 14…	3		0
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	2305	☐	☐	65GK, 127K	2		0
A*66:02	A66	028	A	5848	5624	15.2	POS	☐	2305	☐	☐		0		0
A*66:01	A66	027	A	5322	5122	17.75	POS	☐	2305	☐	☑		0		0
B*15:12	B76,Bw6	043	B	2520	2305	7.13	POS	☐	2305	☐	☐		0		0

Show POS
陽性と判定されたアレル情報のみを表示

Missing Ep Def
カタログに含まれるがEpitope Databaseに含まれないアレルにチェックが入る
(カタログファイルとEpitope Databaseのバージョンが異なる場合)

#of Eplets Only


Epitope Matching
Epitope Analysis
Find
Replace NMDP Code
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
iCn3D

#of Eplets Only
Epiletの数のみの表示となる

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 10/21/2015 | 4/ 3/2019

	Select	Sample ID
▶	☐	112
	☑	112

☑ A 2305 ☑ B 2305 ☑ C 2305

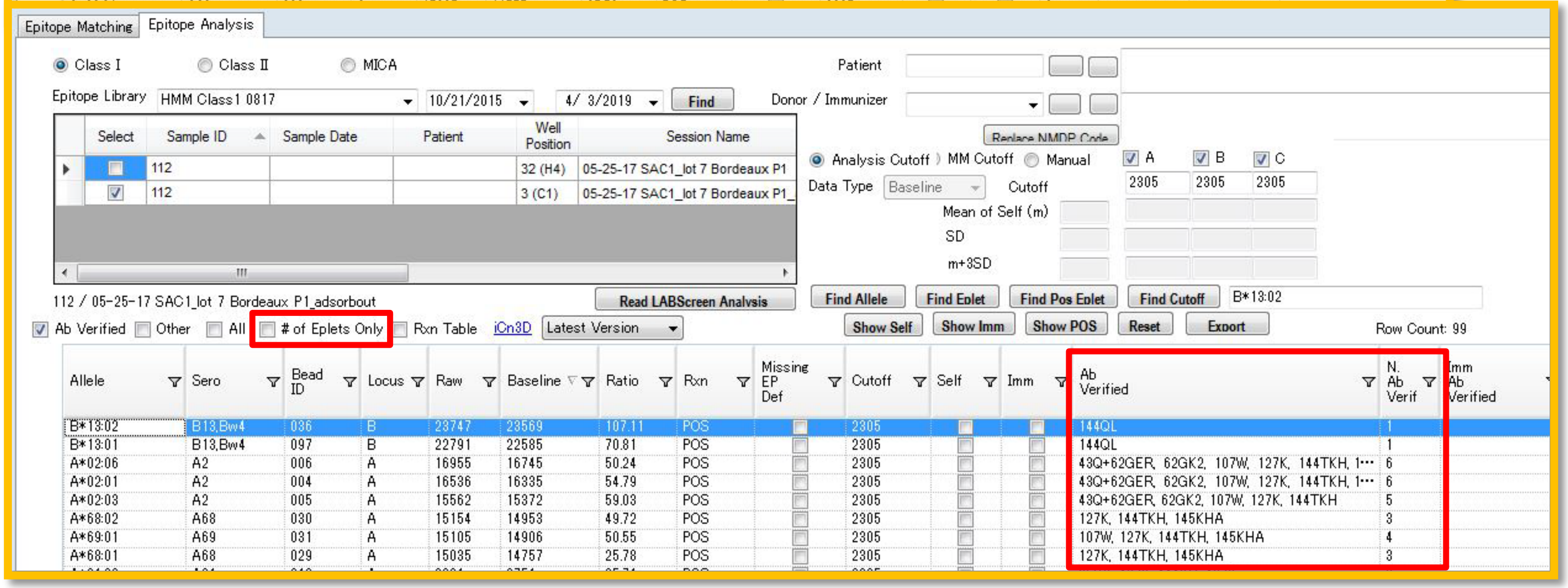
B*13:02

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☑ # of Eplets Only ☐ Rxn Table | Latest Version

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	N. Ab Verif	N. Imm Ab Verified	N. TP Ab Verified
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☐	1		
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	1		
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	6		
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	6		
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	5		
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	3		
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	4		


Epitope Matching
Epitope Analysis
Find
Replace NMDP Code
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
iCn3D

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 10/21/2015 | 4/ 3/2019

Patient

Donor / Immunizer

	Select	Sample ID	Sample Date	Patient	Well Position	Session Name
▶	☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1
	☑	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_

● Analysis Cutoff ○ MM Cutoff ○ Manual

☑ A ☑ B ☑ C

Data Type: Baseline | Cutoff: 2305 | 2305 | 2305

Mean of Self (m)

SD

m+3SD

B*13:02

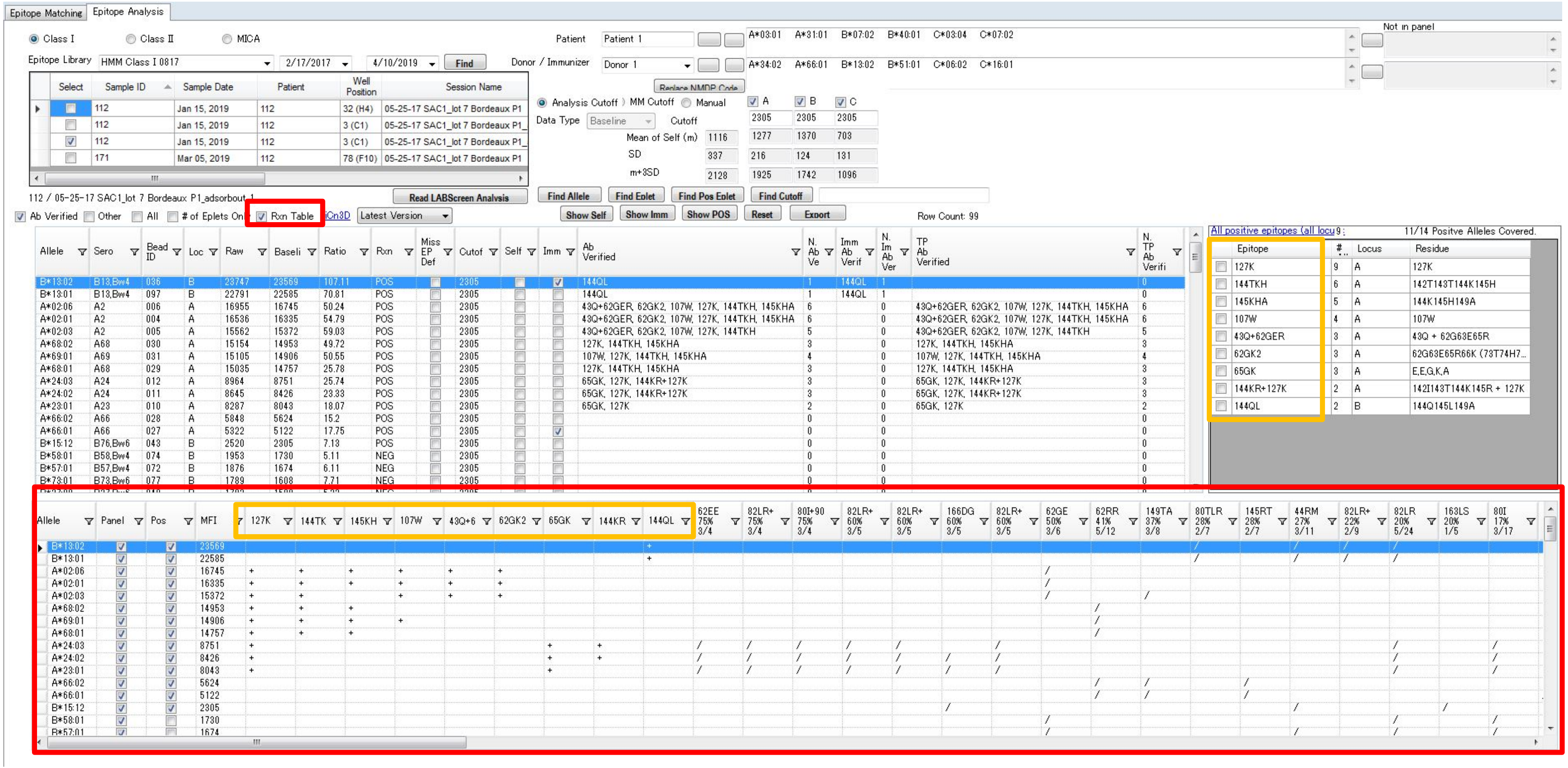
112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table | Latest Version

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verif	Imm Ab Verified
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☐	144QL	1	
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	144QL	1	
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 1···	6	
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 1···	6	
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH	5	
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	127K, 144TKH, 145KHA	3	
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	107W, 127K, 144TKH, 145KHA	4	
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305	☐	☐	127K, 144TKH, 145KHA	3	

Rxn Table-1



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class I 0817 | 2/17/2017 | 4/10/2019 | Find

	Select	Sample ID	Sample Date	Patient	Well Position	Session Name
▶	☐	112	Jan 15, 2019	112	32 (H4)	05-25-17 SAC1_lot 7 Bordeaux P1
	☐	112	Jan 15, 2019	112	3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_
	☑	112	Jan 15, 2019	112	3 (C1)	05-25-17 SAC1_lot 7 Bordeaux P1_
	☐	171	Mar 05, 2019	112	78 (F10)	05-25-17 SAC1_lot 7 Bordeaux P1

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout 1

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Onl ☑ Rxn Table

Latest Version

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

Not in panel

● Analysis Cutoff) MM Cutoff ○ Manual

Data Type: Baseline

		☑ A	☑ B	☑ C
Cutoff		2305	2305	2305
Mean of Self (m)	1116	1277	1370	703
SD	337	216	124	131
m+3SD	2128	1925	1742	1096

Row Count: 99

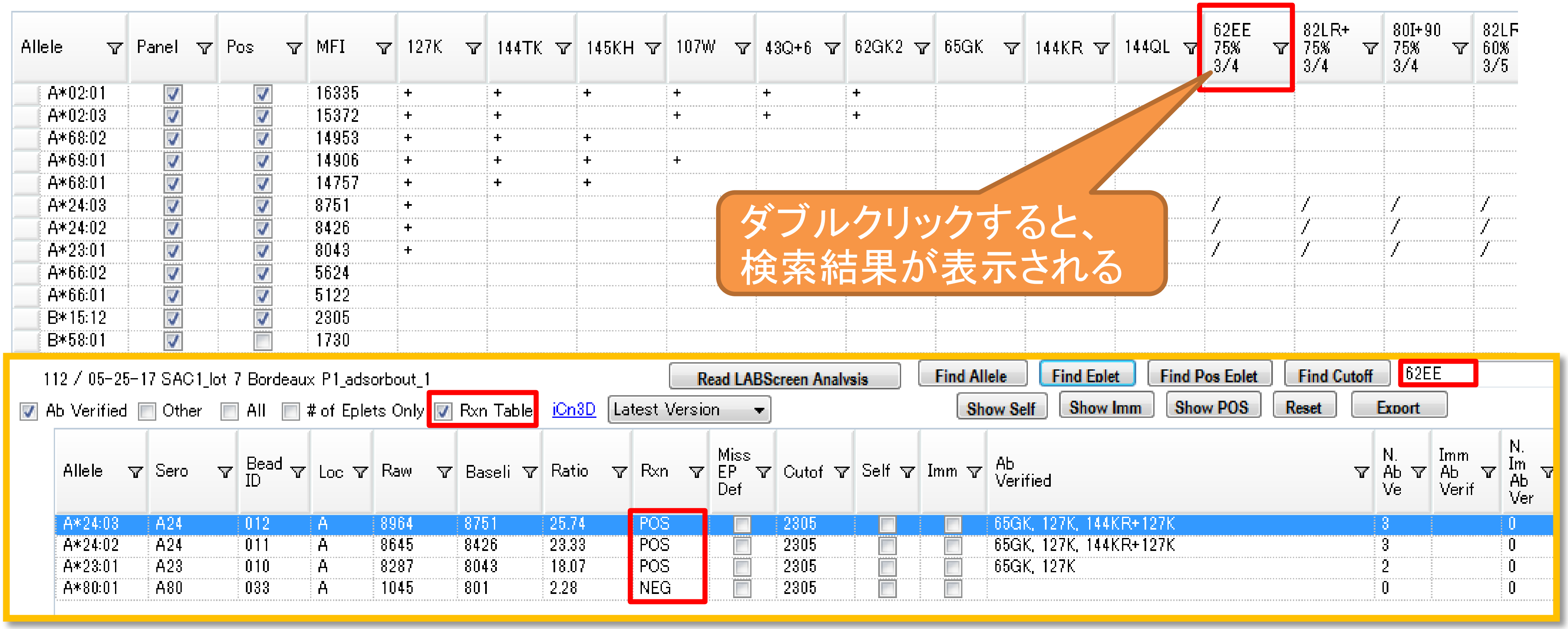
Allele	Sero	Bead ID	Loc	Raw	Baseli	Ratio	Rxn	Miss EP Def	Cutof	Self	Imm	Ab Verified	N. Ab Ve	Imm Ab Verif	N. Im Ab Ver	TP Ab Verified	N. TP Ab Verifi
B*13:02	B13,Bw4	036	B	23747	23569	107.11	POS	☐	2305	☐	☑	144QL	1	144QL	1		0
B*13:01	B13,Bw4	097	B	22791	22585	70.81	POS	☐	2305	☐	☐	144QL	1	144QL	1		0
A*02:06	A2	006	A	16955	16745	50.24	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 145KHA	6		0	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 145KHA	6
A*02:01	A2	004	A	16536	16335	54.79	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 145KHA	6		0	43Q+62GER, 62GK2, 107W, 127K, 144TKH, 145KHA	6
A*02:03	A2	005	A	15562	15372	59.03	POS	☐	2305	☐	☐	43Q+62GER, 62GK2, 107W, 127K, 144TKH	5		0	43Q+62GER, 62GK2, 107W, 127K, 144TKH	5
A*68:02	A68	030	A	15154	14953	49.72	POS	☐	2305	☐	☐	127K, 144TKH, 145KHA	3		0	127K, 144TKH, 145KHA	3
A*69:01	A69	031	A	15105	14906	50.55	POS	☐	2305	☐	☐	107W, 127K, 144TKH, 145KHA	4		0	107W, 127K, 144TKH, 145KHA	4
A*68:01	A68	029	A	15035	14757	25.78	POS	☐	2305	☐	☐	127K, 144TKH, 145KHA	3		0	127K, 144TKH, 145KHA	3
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305	☐	☐	65GK, 127K, 144KR+127K	3		0	65GK, 127K, 144KR+127K	3
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	2305	☐	☐	65GK, 127K, 144KR+127K	3		0	65GK, 127K, 144KR+127K	3
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	2305	☐	☐	65GK, 127K	2		0	65GK, 127K	2
A*66:02	A66	028	A	5848	5624	15.2	POS	☐	2305	☐	☐		0		0		0
A*66:01	A66	027	A	5322	5122	17.75	POS	☐	2305	☐	☑		0		0		0
B*15:12	B76,Bw6	043	B	2520	2305	7.13	POS	☐	2305	☐	☐		0		0		0
B*58:01	B58,Bw4	074	B	1953	1730	5.11	NEG	☐	2305	☐	☐		0		0		0
B*57:01	B57,Bw4	072	B	1876	1674	6.11	NEG	☐	2305	☐	☐		0		0		0
B*73:01	B73,Bw6	077	B	1789	1608	7.71	NEG	☐	2305	☐	☐		0		0		0

All positive epitopes (all locu 9 : 11/14 Positve Alleles Covered.

	Epitope	#..	Locus	Residue
☐	127K	9	A	127K
☐	144TKH	6	A	142T143T144K145H
☐	145KHA	5	A	144K145H149A
☐	107W	4	A	107W
☐	43Q+62GER	3	A	43Q + 62G63E65R
☐	62GK2	3	A	62G63E65R66K (73T74H7…
☐	65GK	3	A	E,E,G,K,A
☐	144KR+127K	2	A	142I143T144K145R + 127K
☐	144QL	2	B	144Q145L149A

Allele	Panel	Pos	MFI	127K	144TK	145KH	107W	43Q+6	62GK2	65GK	144KR	144QL	62EE 75% 3/4	82LR+ 75% 3/4	80I+90 75% 3/4	82LR+ 60% 3/5	82LR+ 60% 3/5	166DG 60% 3/5	82LR+ 60% 3/5	62GE 50% 3/6	62RR 41% 5/12	149TA 37% 3/8	80TLR 28% 2/7	145RT 28% 2/7	44RM 27% 3/11	82LR+ 22% 2/9	82LR 20% 5/24	163LS 20% 1/5	80I 17% 3/17
B*13:02	☑	☑	23569									+											/		/	/	/		
B*13:01	☑	☑	22585									+											/		/	/	/		
A*02:06	☑	☑	16745	+	+	+	+	+	+											/									
A*02:01	☑	☑	16335	+	+	+	+	+	+											/									
A*02:03	☑	☑	15372	+	+		+	+	+											/		/							
A*68:02	☑	☑	14953	+	+	+															/								
A*69:01	☑	☑	14906	+	+	+	+														/								
A*68:01	☑	☑	14757	+	+	+															/								
A*24:03	☑	☑	8751	+						+	+		/	/	/	/	/		/								/		/
A*24:02	☑	☑	8426	+						+	+		/	/	/	/	/	/	/								/		/
A*23:01	☑	☑	8043	+						+			/	/	/	/	/	/	/								/		/
A*66:02	☑	☑	5624																		/	/		/					
A*66:01	☑	☑	5122																		/	/		/					
B*15:12	☑	☑	2305															/							/			/	
B*58:01	☑	☐	1730																	/							/		/
B*57:01	☑	☐	1674																	/					/		/		/

Rxn Table-2



Allele	Panel	Pos	MFI	127K	144TK	145KH	107W	43Q+6	62GK2	65GK	144KR	144QL	62EE 75% 3/4	82LR+ 75% 3/4	80I+90 75% 3/4	82LF 60% 3/5
A*02:01	☑	☑	16335	+	+	+	+	+	+							
A*02:03	☑	☑	15372	+	+		+	+	+							
A*68:02	☑	☑	14953	+	+	+										
A*69:01	☑	☑	14906	+	+	+	+									
A*68:01	☑	☑	14757	+	+	+										
A*24:03	☑	☑	8751	+									/	/	/	/
A*24:02	☑	☑	8426	+									/	/	/	/
A*23:01	☑	☑	8043	+									/	/	/	/
A*66:02	☑	☑	5624													
A*66:01	☑	☑	5122													
B*15:12	☑	☑	2305													
B*58:01	☑	☐	1730													

ダブルクリックすると、
検索結果が表示される

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout_1

Find: 62EE

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☑ Rxn Table

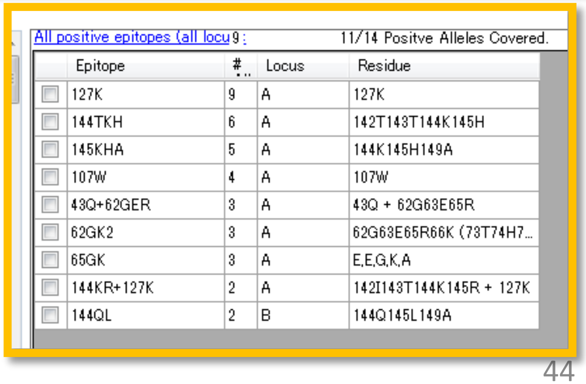
Latest Version

Allele	Sero	Bead ID	Loc	Raw	Baseli	Ratio	Rxn	Miss EP Def	Cutof	Self	Imm	Ab Verified	N. Ab Ve	Imm Ab Verif	N. Im Ab Ver
A*24:03	A24	012	A	8964	8751	25.74	POS	☐	2305	☐	☐	65GK, 127K, 144KR+127K	3		0
A*24:02	A24	011	A	8645	8426	23.33	POS	☐	2305	☐	☐	65GK, 127K, 144KR+127K	3		0
A*23:01	A23	010	A	8287	8043	18.07	POS	☐	2305	☐	☐	65GK, 127K	2		0
A*80:01	A80	033	A	1045	801	2.28	NEG	☐	2305	☐	☐		0		0

Rxn Table

＋：Positive判定のアレルのみに含まれるEpilet
（陽性と判定されたEpitopeのみが対象）

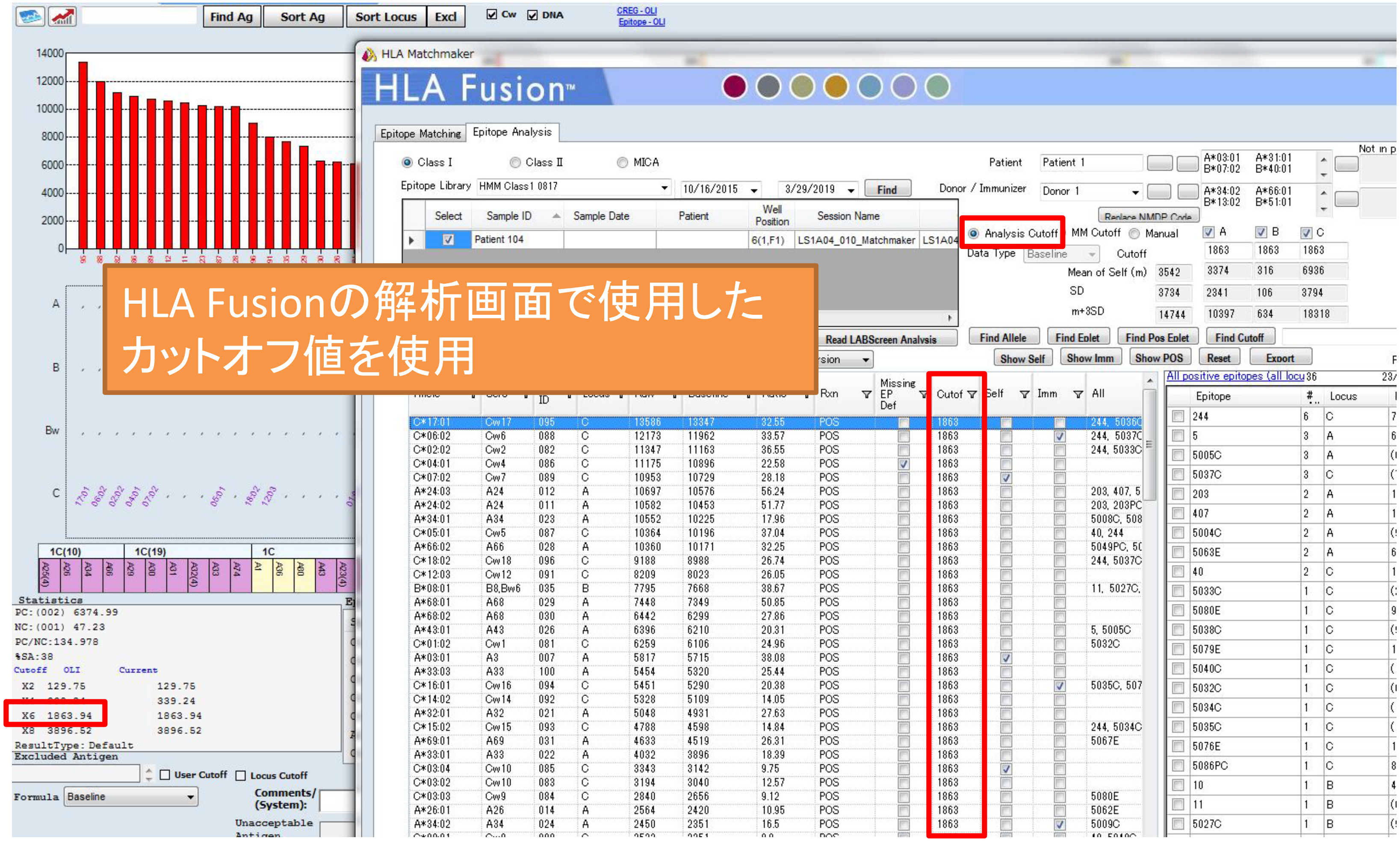
／：Negative判定のアレルにも含まれるEpilet
Positive判定のアレルにのみ「/」が表示される
例）計4アレルのうち3アレルがPositive



All positive epitopes (all locu 9 :　11/14 Positve Alleles Covered.

	Epitope	#..	Locus	Residue
☐	127K	9	A	127K
☐	144TKH	6	A	142T143T144K145H
☐	145KHA	5	A	144K145H149A
☐	107W	4	A	107W
☐	43Q+62GER	3	A	43Q + 62G63E65R
☐	62GK2	3	A	62G63E65R66K (73T74H7…
☐	65GK	3	A	E,E,G,K,A
☐	144KR+127K	2	A	142I143T144K145R + 127K
☐	144QL	2	B	144Q145L149A

カットオフ値 -Analysis Cutoff


Find Ag
Sort Ag
Sort Locus
Excl
☑ Cw
☑ DNA
CREG - OLI
Epitope - OLI
14000
12000
10000
8000
6000
4000
2000
0
A
B
Bw
C
1C(10)
1C(19)
1C
A25(4)
A26
A34
A66
A29
A30
A31
A32(4)
A33
A74
A1
A36
A80
A43
A23(4)
HLA Matchmaker
HLA Fusion™
Epitope Matching
Epitope Analysis
Find
Replace NMDP Code
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
Not in p

Statistics
PC:(002) 6374.99
NC:(001) 47.23
PC/NC:134.978
%SA:38

Cutoff	OLI	Current
X2	129.75	129.75
		339.24
X6	1863.94	1863.94
X8	3896.52	3896.52

ResultType: Default
Excluded Antigen
☐ User Cutoff ☐ Locus Cutoff
Formula: Baseline
Comments/(System):
Unacceptable Antigen

● Class I ○ Class II ○ MICA
Epitope Library: HMM Class1 0817
10/16/2015
3/29/2019

Select	Sample ID	Sample Date	Patient	Well Position	Session Name	
☑	Patient 104			6(1,F1)	LS1A04_010_Matchmaker	LS1A04

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01
Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01

● Analysis Cutoff ○ MM Cutoff ○ Manual
Data Type: Baseline

		☑ A	☑ B	☑ C
Cutoff		1863	1863	1863
Mean of Self (m)	3542	3374	316	6936
SD	3734	2341	106	3794
m+3SD	14744	10397	634	18318

		ID					Rxn	Missing EP Def	Cutof	Self	Imm	All
C*17:01	Cw17	095	C	13586	13347	32.55	POS	☐	1863	☐	☐	244, 5036C
C*06:02	Cw6	088	C	12173	11962	33.57	POS	☐	1863	☐	☑	244, 5037C
C*02:02	Cw2	082	C	11347	11163	36.55	POS	☐	1863	☐	☐	244, 5033C
C*04:01	Cw4	086	C	11175	10896	22.58	POS	☑	1863	☐	☐	
C*07:02	Cw7	089	C	10953	10729	28.18	POS	☐	1863	☑	☐	
A*24:03	A24	012	A	10697	10576	56.24	POS	☐	1863	☐	☐	203, 407, 5
A*24:02	A24	011	A	10582	10453	51.77	POS	☐	1863	☐	☐	203, 203PC
A*34:01	A34	023	A	10552	10225	17.96	POS	☐	1863	☐	☐	5008C, 508
C*05:01	Cw5	087	C	10364	10196	37.04	POS	☐	1863	☐	☐	40, 244
A*66:02	A66	028	A	10360	10171	32.25	POS	☐	1863	☐	☐	5049PC, 50
C*18:02	Cw18	096	C	9188	8988	26.74	POS	☐	1863	☐	☐	244, 5037C
C*12:03	Cw12	091	C	8209	8023	26.05	POS	☐	1863	☐	☐	
B*08:01	B8,Bw6	035	B	7795	7668	38.67	POS	☐	1863	☐	☐	11, 5027C,
A*68:01	A68	029	A	7448	7349	50.85	POS	☐	1863	☐	☐	
A*68:02	A68	030	A	6442	6299	27.86	POS	☐	1863	☐	☐	
A*43:01	A43	026	A	6396	6210	20.31	POS	☐	1863	☐	☐	5, 5005C
C*01:02	Cw1	081	C	6259	6106	24.96	POS	☐	1863	☐	☐	5032C
A*03:01	A3	007	A	5817	5715	38.08	POS	☐	1863	☑	☐	
A*33:03	A33	100	A	5454	5320	25.44	POS	☐	1863	☐	☐	
C*16:01	Cw16	094	C	5451	5290	20.38	POS	☐	1863	☐	☑	5035C, 507
C*14:02	Cw14	092	C	5328	5109	14.05	POS	☐	1863	☐	☐	
A*32:01	A32	021	A	5048	4931	27.63	POS	☐	1863	☐	☐	
C*15:02	Cw15	093	C	4788	4598	14.84	POS	☐	1863	☐	☐	244, 5034C
A*69:01	A69	031	A	4633	4519	26.31	POS	☐	1863	☐	☐	5067E
A*33:01	A33	022	A	4032	3896	18.39	POS	☐	1863	☐	☐	
C*03:04	Cw10	085	C	3343	3142	9.75	POS	☐	1863	☑	☐	
C*03:02	Cw10	083	C	3194	3040	12.57	POS	☐	1863	☐	☐	
C*03:03	Cw9	084	C	2840	2656	9.12	POS	☐	1863	☐	☐	5080E
A*26:01	A26	014	A	2564	2420	10.95	POS	☐	1863	☐	☐	5062E
A*34:02	A34	024	A	2450	2351	16.5	POS	☐	1863	☐	☑	5009C

All positive epitopes (all locu 36

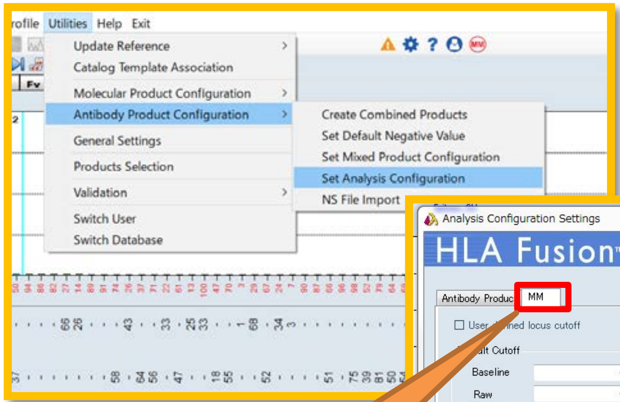
	Epitope	#	Locus
☐	244	6	C
☐	5	3	A
☐	5005C	3	A
☐	5037C	3	C
☐	203	2	A
☐	407	2	A
☐	5004C	2	A
☐	5063E	2	A
☐	40	2	C
☐	5033C	1	C
☐	5080E	1	C
☐	5038C	1	C
☐	5079E	1	C
☐	5040C	1	C
☐	5032C	1	C
☐	5034C	1	C
☐	5035C	1	C
☐	5076E	1	C
☐	5086PC	1	C
☐	10	1	B
☐	11	1	B
☐	5027C	1	B

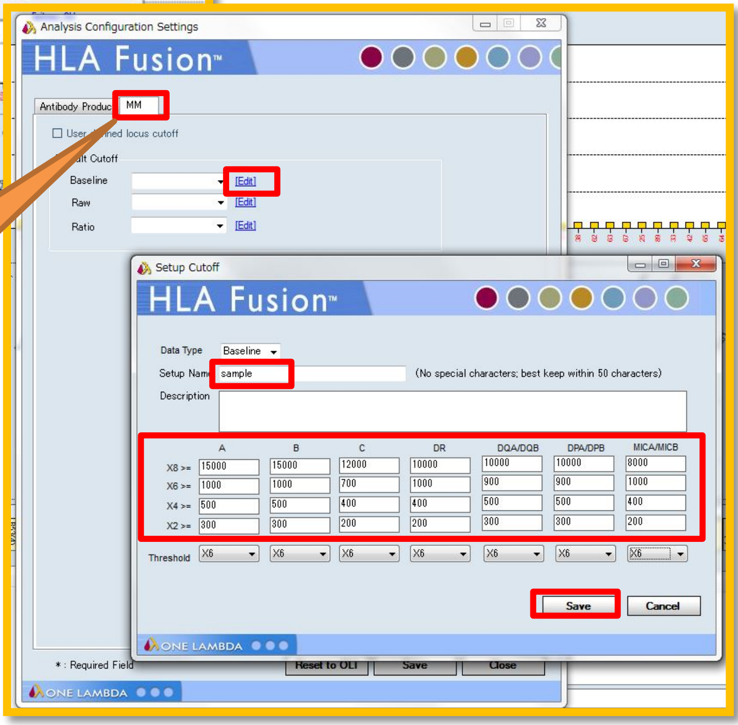
HLA Fusionの解析画面で使用した
カットオフ値を使用

カットオフ値 -MM Cutoff-1

Utilities→Antibody Product Configuration→Set Abalysis Configurationの順にクリック

MMタブを開き、Editをクリックする
各ローカスのカットオフ値を入力し、
Setup Nameに名前を入力しSave


rofile
Utilities
Help
Exit
Update Reference
Catalog Template Association
Molecular Product Configuration
Antibody Product Configuration
General Settings
Products Selection
Validation
Switch User
Switch Database
Create Combined Products
Set Default Negative Value
Set Mixed Product Configuration
Set Analysis Configuration
NS File Import


Analysis Configuration Settings
HLA Fusion™
Antibody Product
MM
User defined locus cutoff
Default Cutoff
Baseline
Raw
Ratio
[Edit]
Setup Cutoff
Threshold
Save
Cancel
Reset to OLI
Close
ONE LAMBDA

＊注意＊
MMのタブです

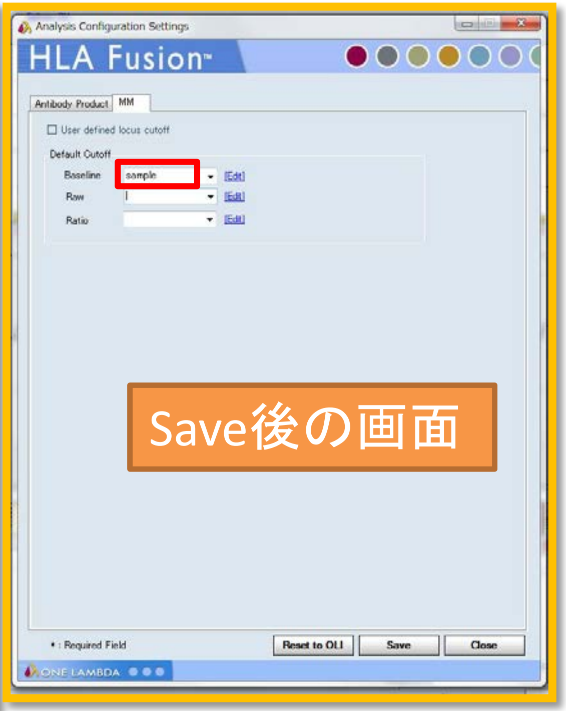
Data Type: Baseline

Setup Name: sample (No special characters; best keep within 50 characters)

Description:

	A	B	C	DR	DQA/DQB	DPA/DPB	MICA/MICB
X8 >=	15000	15000	12000	10000	10000	10000	8000
X6 >=	1000	1000	700	1000	900	900	1000
X4 >=	500	500	400	400	500	500	400
X2 >=	300	300	200	200	300	300	200
Threshold	X6	X6	X6	X6	X6	X6	X6

* : Required Field

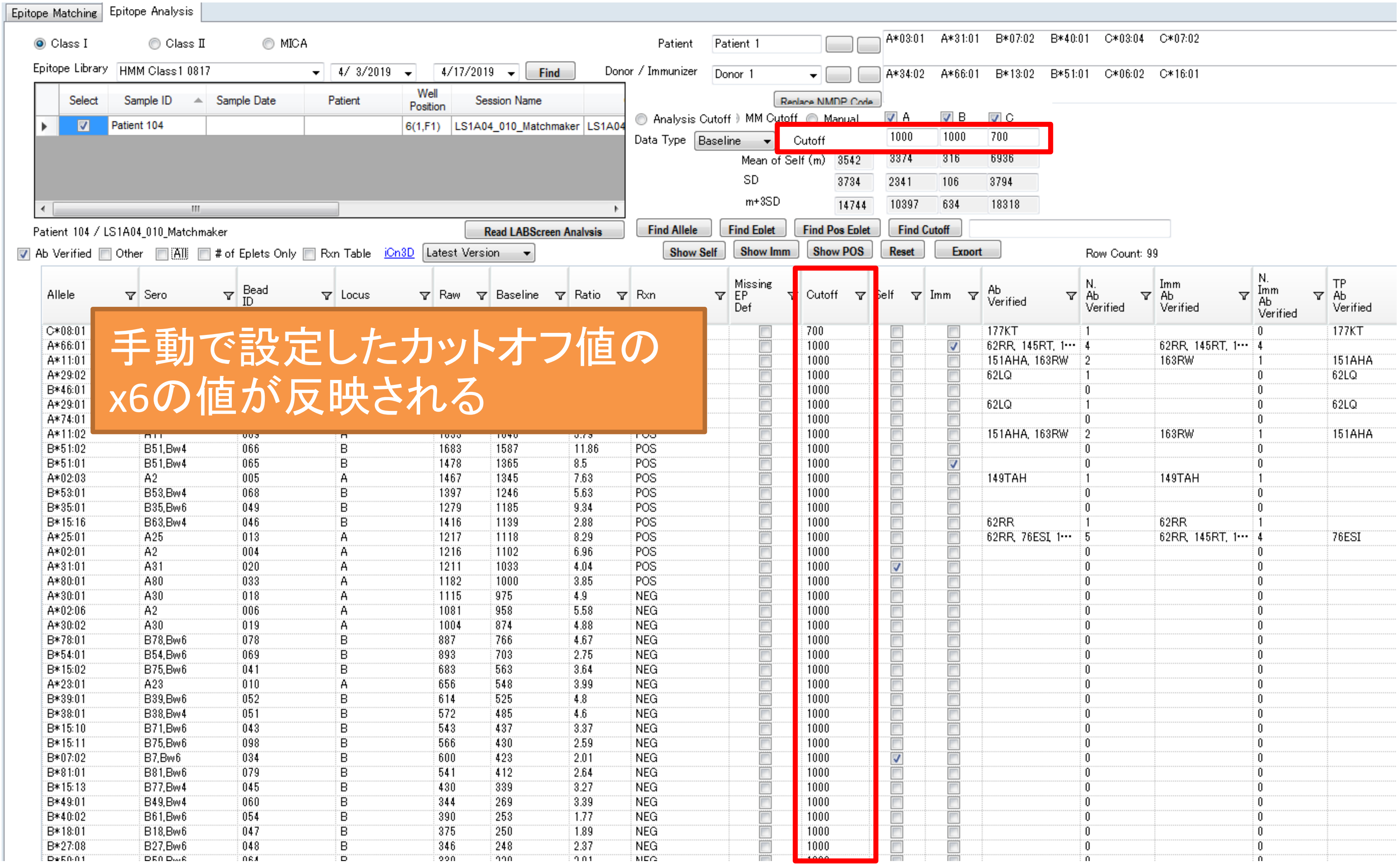

Analysis Configuration Settings
HLA Fusion™
Antibody Product
MM
User defined locus cutoff
Default Cutoff
Raw
Ratio
[Edit]
Reset to OLI
Save
Close
ONE LAMBDA

Baseline: sample

* : Required Field

Save後の画面

カットオフ値 -MM Cutoff-2



Epitope Matching | Epitope Analysis

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 4/ 3/2019 | 4/17/2019 | Find

	Select	Sample ID	Sample Date	Patient	Well Position	Session Name	
▶	☑	Patient 104			6(1,F1)	LS1A04_010_Matchmaker	LS1A04

Patient 104 / LS1A04_010_Matchmaker

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

○ Analysis Cutoff ● MM Cutoff ○ Manual

Data Type: Baseline

		☑ A	☑ B	☑ C
Cutoff		1000	1000	700
Mean of Self (m)	3542	3374	316	6936
SD	3734	2341	106	3794
m+3SD	14744	10397	634	18318

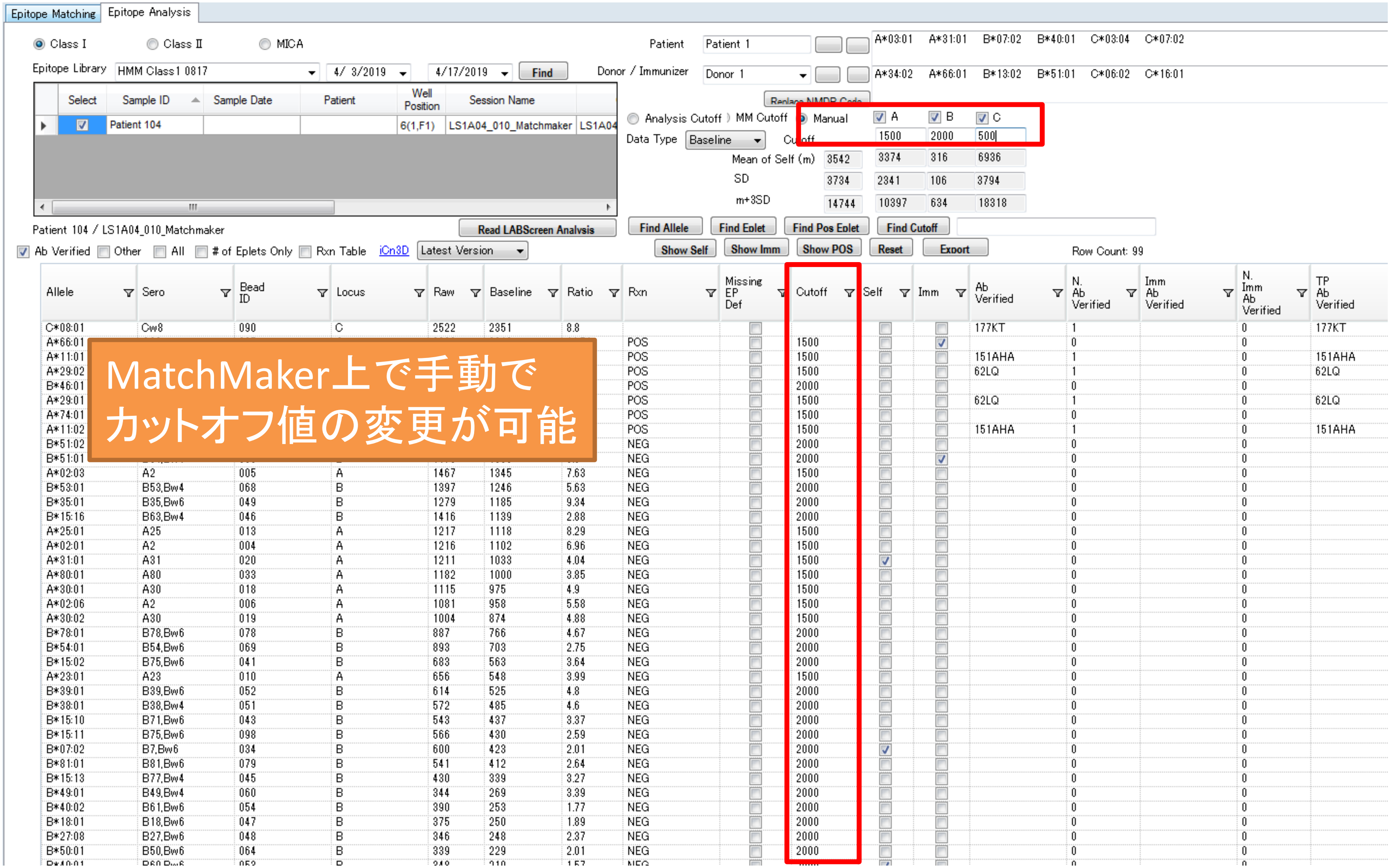
☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified	TP Ab Verified
C*08:01								☐	700	☐	☐	177KT	1		0	177KT
A*66:01								☐	1000	☐	☑	62RR, 145RT, 1···	4	62RR, 145RT, 1···	4	
A*11:01								☐	1000	☐	☐	151AHA, 163RW	2	163RW	1	151AHA
A*29:02								☐	1000	☐	☐	62LQ	1		0	62LQ
B*46:01								☐	1000	☐	☐		0		0	
A*29:01								☐	1000	☐	☐	62LQ	1		0	62LQ
A*74:01								☐	1000	☐	☐		0		0	
A*11:02								☐	1000	☐	☐	151AHA, 163RW	2	163RW	1	151AHA
B*51:02	B51,Bw4	066	B	1683	1587	11.86	POS	☐	1000	☐	☐		0		0	
B*51:01	B51,Bw4	065	B	1478	1365	8.5	POS	☐	1000	☐	☑		0		0	
A*02:03	A2	005	A	1467	1345	7.63	POS	☐	1000	☐	☐	149TAH	1	149TAH	1	
B*53:01	B53,Bw4	068	B	1397	1246	5.63	POS	☐	1000	☐	☐		0		0	
B*35:01	B35,Bw6	049	B	1279	1185	9.34	POS	☐	1000	☐	☐		0		0	
B*15:16	B63,Bw4	046	B	1416	1139	2.88	POS	☐	1000	☐	☐	62RR	1	62RR	1	
A*25:01	A25	013	A	1217	1118	8.29	POS	☐	1000	☐	☐	62RR, 76ESI, 1···	5	62RR, 145RT, 1···	4	76ESI
A*02:01	A2	004	A	1216	1102	6.96	POS	☐	1000	☐	☐		0		0	
A*31:01	A31	020	A	1211	1033	4.04	POS	☐	1000	☑	☐		0		0	
A*80:01	A80	033	A	1182	1000	3.85	POS	☐	1000	☐	☐		0		0	
A*30:01	A30	018	A	1115	975	4.9	NEG	☐	1000	☐	☐		0		0	
A*02:06	A2	006	A	1081	958	5.58	NEG	☐	1000	☐	☐		0		0	
A*30:02	A30	019	A	1004	874	4.88	NEG	☐	1000	☐	☐		0		0	
B*78:01	B78,Bw6	078	B	887	766	4.67	NEG	☐	1000	☐	☐		0		0	
B*54:01	B54,Bw6	069	B	893	703	2.75	NEG	☐	1000	☐	☐		0		0	
B*15:02	B75,Bw6	041	B	683	563	3.64	NEG	☐	1000	☐	☐		0		0	
A*23:01	A23	010	A	656	548	3.99	NEG	☐	1000	☐	☐		0		0	
B*39:01	B39,Bw6	052	B	614	525	4.8	NEG	☐	1000	☐	☐		0		0	
B*38:01	B38,Bw4	051	B	572	485	4.6	NEG	☐	1000	☐	☐		0		0	
B*15:10	B71,Bw6	043	B	543	437	3.37	NEG	☐	1000	☐	☐		0		0	
B*15:11	B75,Bw6	098	B	566	430	2.59	NEG	☐	1000	☐	☐		0		0	
B*07:02	B7,Bw6	034	B	600	423	2.01	NEG	☐	1000	☑	☐		0		0	
B*81:01	B81,Bw6	079	B	541	412	2.64	NEG	☐	1000	☐	☐		0		0	
B*15:13	B77,Bw4	045	B	430	339	3.27	NEG	☐	1000	☐	☐		0		0	
B*49:01	B49,Bw4	060	B	344	269	3.39	NEG	☐	1000	☐	☐		0		0	
B*40:02	B61,Bw6	054	B	390	253	1.77	NEG	☐	1000	☐	☐		0		0	
B*18:01	B18,Bw6	047	B	375	250	1.89	NEG	☐	1000	☐	☐		0		0	
B*27:08	B27,Bw6	048	B	346	248	2.37	NEG	☐	1000	☐	☐		0		0	

手動で設定したカットオフ値のx6の値が反映される

カットオフ値 -Manual cutoff



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 4/ 3/2019 | 4/17/2019

Select	Sample ID	Sample Date	Patient	Well Position	Session Name	
☑	Patient 104			6(1,F1)	LS1A04_010_Matchmaker	LS1A04

Patient 104 / LS1A04_010_Matchmaker

Patient: Patient 1 — A*03:01 A*31:01 B*07:02 B*40:01 C*03:04 C*07:02

Donor / Immunizer: Donor 1 — A*34:02 A*66:01 B*13:02 B*51:01 C*06:02 C*16:01

○ Analysis Cutoff ○ MM Cutoff ● Manual

Data Type: Baseline

		☑ A	☑ B	☑ C
Cutoff		1500	2000	500
Mean of Self (m)	3542	3374	316	6936
SD	3734	2341	106	3794
m+3SD	14744	10397	634	18318

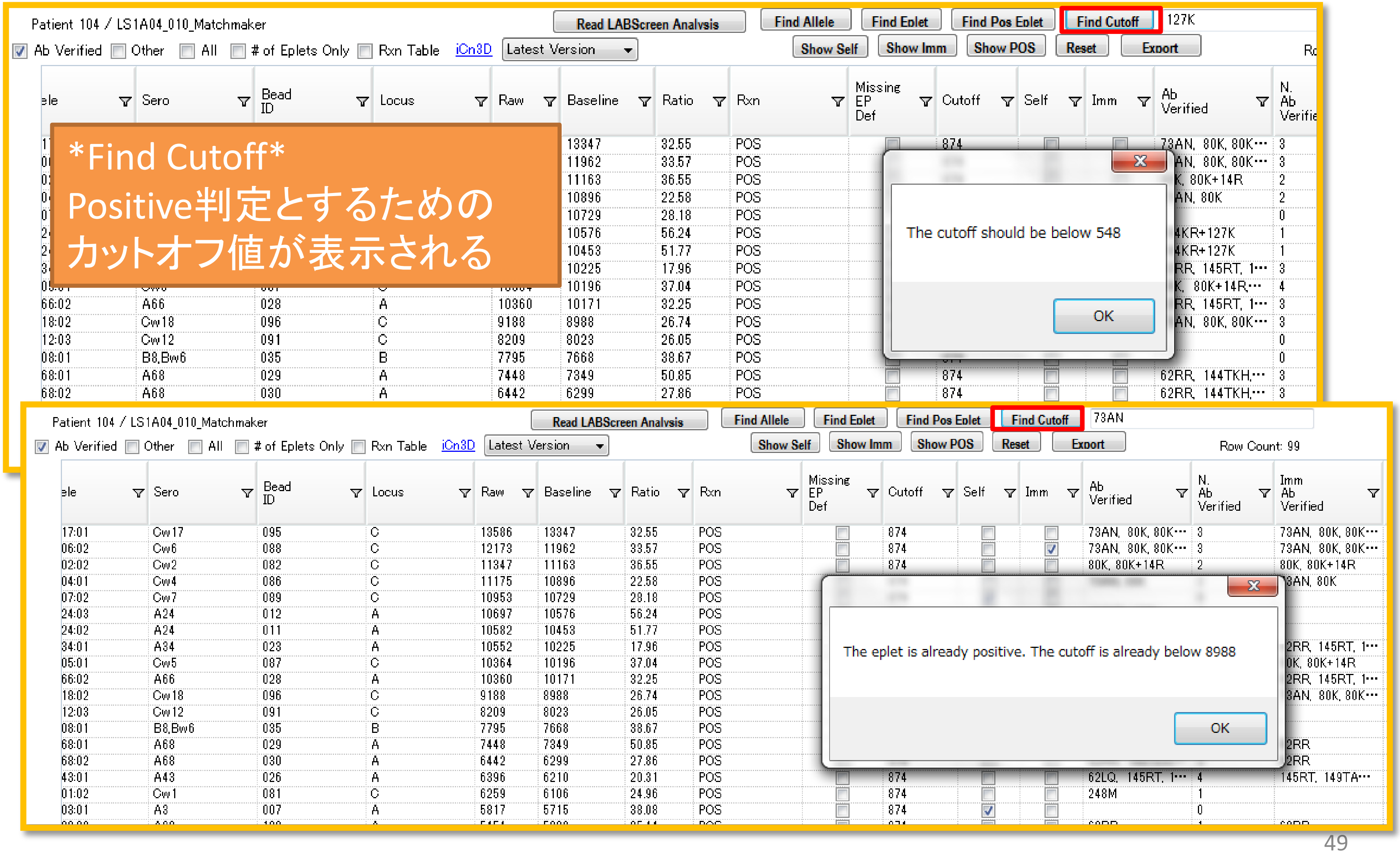
☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table | Latest Version

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified	TP Ab Verified
C*08:01	Cw8	090	C	2522	2351	8.8		☐		☐	☐	177KT	1		0	177KT
A*66:01							POS	☐	1500	☐	☑		0		0	
A*11:01							POS	☐	1500	☐	☐	151AHA	1		0	151AHA
A*29:02							POS	☐	1500	☐	☐	62LQ	1		0	62LQ
B*46:01							POS	☐	2000	☐	☐		0		0	
A*29:01							POS	☐	1500	☐	☐	62LQ	1		0	62LQ
A*74:01							POS	☐	1500	☐	☐		0		0	
A*11:02							POS	☐	1500	☐	☐	151AHA	1		0	151AHA
B*51:02							NEG	☐	2000	☐	☐		0		0	
B*51:01							NEG	☐	2000	☐	☑		0		0	
A*02:03	A2	005	A	1467	1345	7.63	NEG	☐	1500	☐	☐		0		0	
B*53:01	B53,Bw4	068	B	1397	1246	5.63	NEG	☐	2000	☐	☐		0		0	
B*35:01	B35,Bw6	049	B	1279	1185	9.34	NEG	☐	2000	☐	☐		0		0	
B*15:16	B63,Bw4	046	B	1416	1139	2.88	NEG	☐	2000	☐	☐		0		0	
A*25:01	A25	013	A	1217	1118	8.29	NEG	☐	1500	☐	☐		0		0	
A*02:01	A2	004	A	1216	1102	6.96	NEG	☐	1500	☐	☐		0		0	
A*31:01	A31	020	A	1211	1033	4.04	NEG	☐	1500	☑	☐		0		0	
A*80:01	A80	033	A	1182	1000	3.85	NEG	☐	1500	☐	☐		0		0	
A*30:01	A30	018	A	1115	975	4.9	NEG	☐	1500	☐	☐		0		0	
A*02:06	A2	006	A	1081	958	5.58	NEG	☐	1500	☐	☐		0		0	
A*30:02	A30	019	A	1004	874	4.88	NEG	☐	1500	☐	☐		0		0	
B*78:01	B78,Bw6	078	B	887	766	4.67	NEG	☐	2000	☐	☐		0		0	
B*54:01	B54,Bw6	069	B	893	703	2.75	NEG	☐	2000	☐	☐		0		0	
B*15:02	B75,Bw6	041	B	683	563	3.64	NEG	☐	2000	☐	☐		0		0	
A*23:01	A23	010	A	656	548	3.99	NEG	☐	1500	☐	☐		0		0	
B*39:01	B39,Bw6	052	B	614	525	4.8	NEG	☐	2000	☐	☐		0		0	
B*38:01	B38,Bw4	051	B	572	485	4.6	NEG	☐	2000	☐	☐		0		0	
B*15:10	B71,Bw6	043	B	543	437	3.37	NEG	☐	2000	☐	☐		0		0	
B*15:11	B75,Bw6	098	B	566	430	2.59	NEG	☐	2000	☐	☐		0		0	
B*07:02	B7,Bw6	034	B	600	423	2.01	NEG	☐	2000	☑	☐		0		0	
B*81:01	B81,Bw6	079	B	541	412	2.64	NEG	☐	2000	☐	☐		0		0	
B*15:13	B77,Bw4	045	B	430	339	3.27	NEG	☐	2000	☐	☐		0		0	
B*49:01	B49,Bw4	060	B	344	269	3.39	NEG	☐	2000	☐	☐		0		0	
B*40:02	B61,Bw6	054	B	390	253	1.77	NEG	☐	2000	☐	☐		0		0	
B*18:01	B18,Bw6	047	B	375	250	1.89	NEG	☐	2000	☐	☐		0		0	
B*27:08	B27,Bw6	048	B	346	248	2.37	NEG	☐	2000	☐	☐		0		0	
B*50:01	B50,Bw6	064	B	339	229	2.01	NEG	☐	2000	☐	☐		0		0	

MatchMaker上で手動で
カットオフ値の変更が可能

Find Cutoff



Patient 104 / LS1A04_010_Matchmaker

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table

Find Cutoff: 127K

ele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verifie
					13347	32.55	POS	☐	874	☐	☐	73AN, 80K, 80K…	3
					11962	33.57	POS					AN, 80K, 80K…	3
					11163	36.55	POS					K, 80K+14R	2
					10896	22.58	POS					AN, 80K	2
					10729	28.18	POS						0
					10576	56.24	POS					4KR+127K	1
					10453	51.77	POS					4KR+127K	1
					10225	17.96	POS					RR, 145RT, 1…	3
					10196	37.04	POS					K, 80K+14R,…	4
66:02	A66	028	A	10360	10171	32.25	POS					RR, 145RT, 1…	3
18:02	Cw18	096	C	9188	8988	26.74	POS					AN, 80K, 80K…	3
12:03	Cw12	091	C	8209	8023	26.05	POS						0
08:01	B8,Bw6	035	B	7795	7668	38.67	POS						0
68:01	A68	029	A	7448	7349	50.85	POS	☐	874	☐	☐	62RR, 144TKH,…	3
68:02	A68	030	A	6442	6299	27.86	POS	☐	874	☐	☐	62RR, 144TKH,…	3

The cutoff should be below 548

OK

Patient 104 / LS1A04_010_Matchmaker

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table

Find Cutoff: 73AN

Row Count: 99

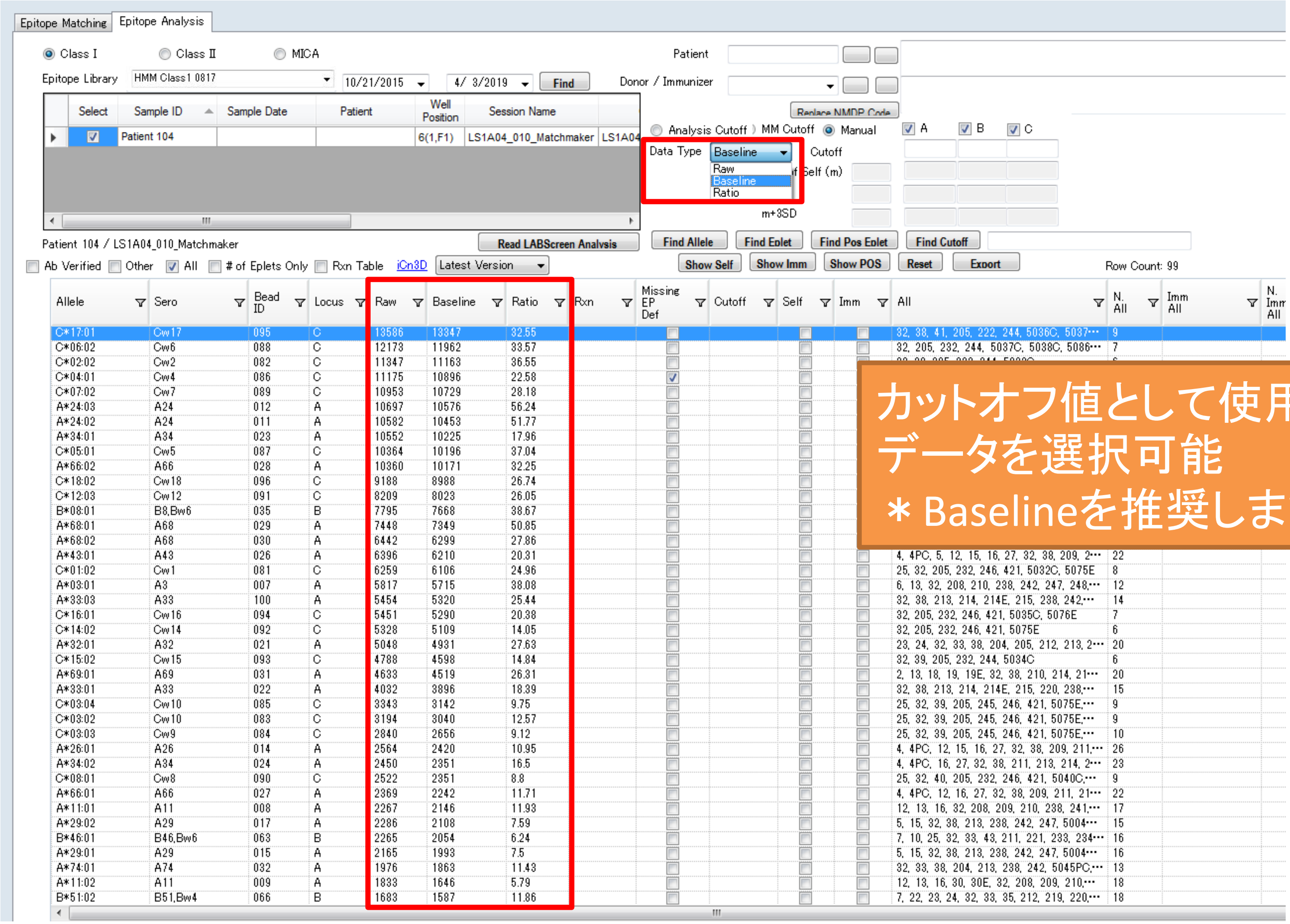
ele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified
17:01	Cw17	095	C	13586	13347	32.55	POS	☐	874	☐	☐	73AN, 80K, 80K…	3	73AN, 80K, 80K…
06:02	Cw6	088	C	12173	11962	33.57	POS	☐	874	☐	☑	73AN, 80K, 80K…	3	73AN, 80K, 80K…
02:02	Cw2	082	C	11347	11163	36.55	POS	☐	874	☐	☐	80K, 80K+14R	2	80K, 80K+14R
04:01	Cw4	086	C	11175	10896	22.58	POS							3AN, 80K
07:02	Cw7	089	C	10953	10729	28.18	POS							
24:03	A24	012	A	10697	10576	56.24	POS							
24:02	A24	011	A	10582	10453	51.77	POS							
34:01	A34	023	A	10552	10225	17.96	POS							2RR, 145RT, 1…
05:01	Cw5	087	C	10364	10196	37.04	POS							0K, 80K+14R
66:02	A66	028	A	10360	10171	32.25	POS							2RR, 145RT, 1…
18:02	Cw18	096	C	9188	8988	26.74	POS							3AN, 80K, 80K…
12:03	Cw12	091	C	8209	8023	26.05	POS							
08:01	B8,Bw6	035	B	7795	7668	38.67	POS							
68:01	A68	029	A	7448	7349	50.85	POS							2RR
68:02	A68	030	A	6442	6299	27.86	POS							2RR
43:01	A43	026	A	6396	6210	20.31	POS	☐	874	☐	☐	62LQ, 145RT, 1…	4	145RT, 149TA…
01:02	Cw1	081	C	6259	6106	24.96	POS	☐	874	☐	☐	248M	1	
03:01	A3	007	A	5817	5715	38.08	POS	☐	874	☑	☐		0	

The eplet is already positive. The cutoff is already below 8988

OK

Find Cutoff
Positive判定とするためのカットオフ値が表示される

使用するデータの種類の選択



● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 10/21/2015 4/ 3/2019

Patient

Donor / Immunizer

	Select	Sample ID	Sample Date	Patient	Well Position	Session Name	
▶	☑	Patient 104			6(1,F1)	LS1A04_010_Matchmaker	LS1A04

○ Analysis Cutoff) MM Cutoff ● Manual ☑ A ☑ B ☑ C

Data Type: Baseline

Cutoff

f Self (m)

m+3SD

Patient 104 / LS1A04_010_Matchmaker

☐ Ab Verified ☐ Other ☑ All ☐ # of Eplets Only ☐ Rxn Table

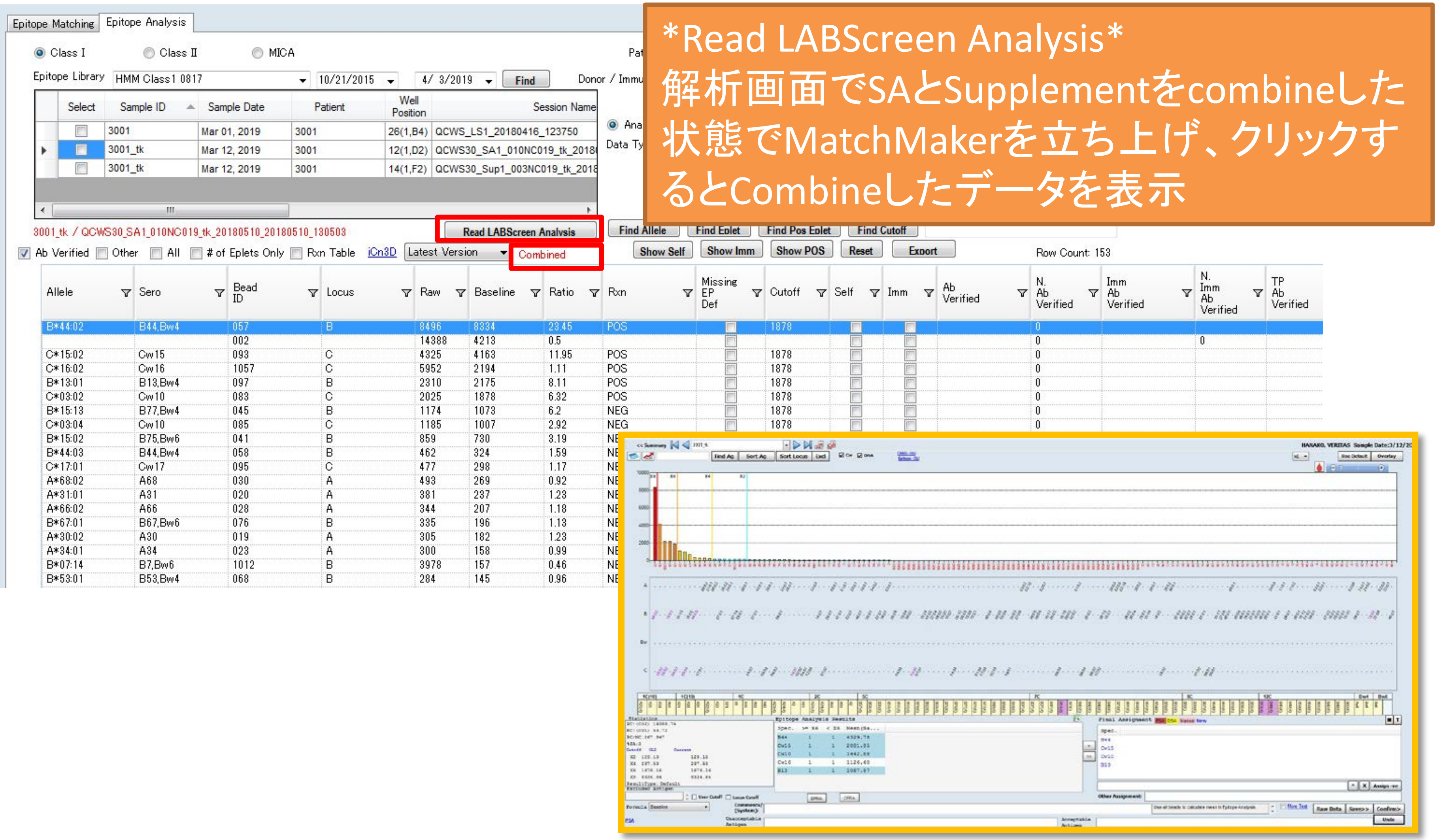
Latest Version

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	All	N. All	Imm All	N. Imm All
C*17:01	Cw17	095	C	13586	13347	32.55		☐		☐	☐	32, 38, 41, 205, 222, 244, 5036C, 5037···	9		
C*06:02	Cw6	088	C	12173	11962	33.57		☐		☐	☐	32, 205, 232, 244, 5037C, 5038C, 5086···	7		
C*02:02	Cw2	082	C	11347	11163	36.55		☐		☐					
C*04:01	Cw4	086	C	11175	10896	22.58		☑		☐					
C*07:02	Cw7	089	C	10953	10729	28.18		☐		☐					
A*24:03	A24	012	A	10697	10576	56.24		☐		☐					
A*24:02	A24	011	A	10582	10453	51.77		☐		☐					
A*34:01	A34	023	A	10552	10225	17.96		☐		☐					
C*05:01	Cw5	087	C	10364	10196	37.04		☐		☐					
A*66:02	A66	028	A	10360	10171	32.25		☐		☐					
C*18:02	Cw18	096	C	9188	8988	26.74		☐		☐					
C*12:03	Cw12	091	C	8209	8023	26.05		☐		☐					
B*08:01	B8,Bw6	035	B	7795	7668	38.67		☐		☐					
A*68:01	A68	029	A	7448	7349	50.85		☐		☐					
A*68:02	A68	030	A	6442	6299	27.86		☐		☐					
A*43:01	A43	026	A	6396	6210	20.31		☐		☐	☐	4, 4PC, 5, 12, 15, 16, 27, 32, 38, 209, 2···	22		
C*01:02	Cw1	081	C	6259	6106	24.96		☐		☐	☐	25, 32, 205, 232, 246, 421, 5032C, 5075E	8		
A*03:01	A3	007	A	5817	5715	38.08		☐		☐	☐	6, 13, 32, 208, 210, 238, 242, 247, 248,···	12		
A*33:03	A33	100	A	5454	5320	25.44		☐		☐	☐	32, 38, 213, 214, 214E, 215, 238, 242,···	14		
C*16:01	Cw16	094	C	5451	5290	20.38		☐		☐	☐	32, 205, 232, 246, 421, 5035C, 5076E	7		
C*14:02	Cw14	092	C	5328	5109	14.05		☐		☐	☐	32, 205, 232, 246, 421, 5075E	6		
A*32:01	A32	021	A	5048	4931	27.63		☐		☐	☐	23, 24, 32, 33, 38, 204, 205, 212, 213, 2···	20		
C*15:02	Cw15	093	C	4788	4598	14.84		☐		☐	☐	32, 39, 205, 232, 244, 5034C	6		
A*69:01	A69	031	A	4633	4519	26.31		☐		☐	☐	2, 13, 18, 19, 19E, 32, 38, 210, 214, 21···	20		
A*33:01	A33	022	A	4032	3896	18.39		☐		☐	☐	32, 38, 213, 214, 214E, 215, 220, 238,···	15		
C*03:04	Cw10	085	C	3343	3142	9.75		☐		☐	☐	25, 32, 39, 205, 245, 246, 421, 5075E,···	9		
C*03:02	Cw10	083	C	3194	3040	12.57		☐		☐	☐	25, 32, 39, 205, 245, 246, 421, 5075E,···	9		
C*03:03	Cw9	084	C	2840	2656	9.12		☐		☐	☐	25, 32, 39, 205, 245, 246, 421, 5075E,···	10		
A*26:01	A26	014	A	2564	2420	10.95		☐		☐	☐	4, 4PC, 12, 15, 16, 27, 32, 38, 209, 211,···	26		
A*34:02	A34	024	A	2450	2351	16.5		☐		☐	☐	4, 4PC, 16, 27, 32, 38, 211, 213, 214, 2···	23		
C*08:01	Cw8	090	C	2522	2351	8.8		☐		☐	☐	25, 32, 40, 205, 232, 246, 421, 5040C,···	9		
A*66:01	A66	027	A	2369	2242	11.71		☐		☐	☐	4, 4PC, 12, 16, 27, 32, 38, 209, 211, 21···	22		
A*11:01	A11	008	A	2267	2146	11.93		☐		☐	☐	12, 13, 16, 32, 208, 209, 210, 238, 241,···	17		
A*29:02	A29	017	A	2286	2108	7.59		☐		☐	☐	5, 15, 32, 38, 213, 238, 242, 247, 5004···	15		
B*46:01	B46,Bw6	063	B	2265	2054	6.24		☐		☐	☐	7, 10, 25, 32, 33, 43, 211, 221, 233, 234···	16		
A*29:01	A29	015	A	2165	1993	7.5		☐		☐	☐	5, 15, 32, 38, 213, 238, 242, 247, 5004···	16		
A*74:01	A74	032	A	1976	1863	11.43		☐		☐	☐	32, 33, 38, 204, 213, 238, 242, 5045PC,···	13		
A*11:02	A11	009	A	1833	1646	5.79		☐		☐	☐	12, 13, 16, 30, 30E, 32, 208, 209, 210,···	18		
B*51:02	B51,Bw4	066	B	1683	1587	11.86		☐		☐	☐	7, 22, 23, 24, 32, 33, 35, 212, 219, 220,···	18		

カットオフ値として使用する
データを選択可能
＊Baselineを推奨します

Single&Supplement Combine data



Epitope Matching
Epitope Analysis
Find
Read LABScreen Analysis
Find Allele
Find Eplet
Find Pos Eplet
Find Cutoff
Show Self
Show Imm
Show POS
Reset
Export
iCn3D

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 10/21/2015 | 4/ 3/2019

	Select	Sample ID	Sample Date	Patient	Well Position	Session Name
	☐	3001	Mar 01, 2019	3001	26(1,B4)	QCWS_LS1_20180416_123750
▶	☐	3001_tk	Mar 12, 2019	3001	12(1,D2)	QCWS30_SA1_010NC019_tk_2018
	☐	3001_tk	Mar 12, 2019	3001	14(1,F2)	QCWS30_Sup1_003NC019_tk_2018

3001_tk / QCWS30_SA1_010NC019_tk_20180510_20180510_130503

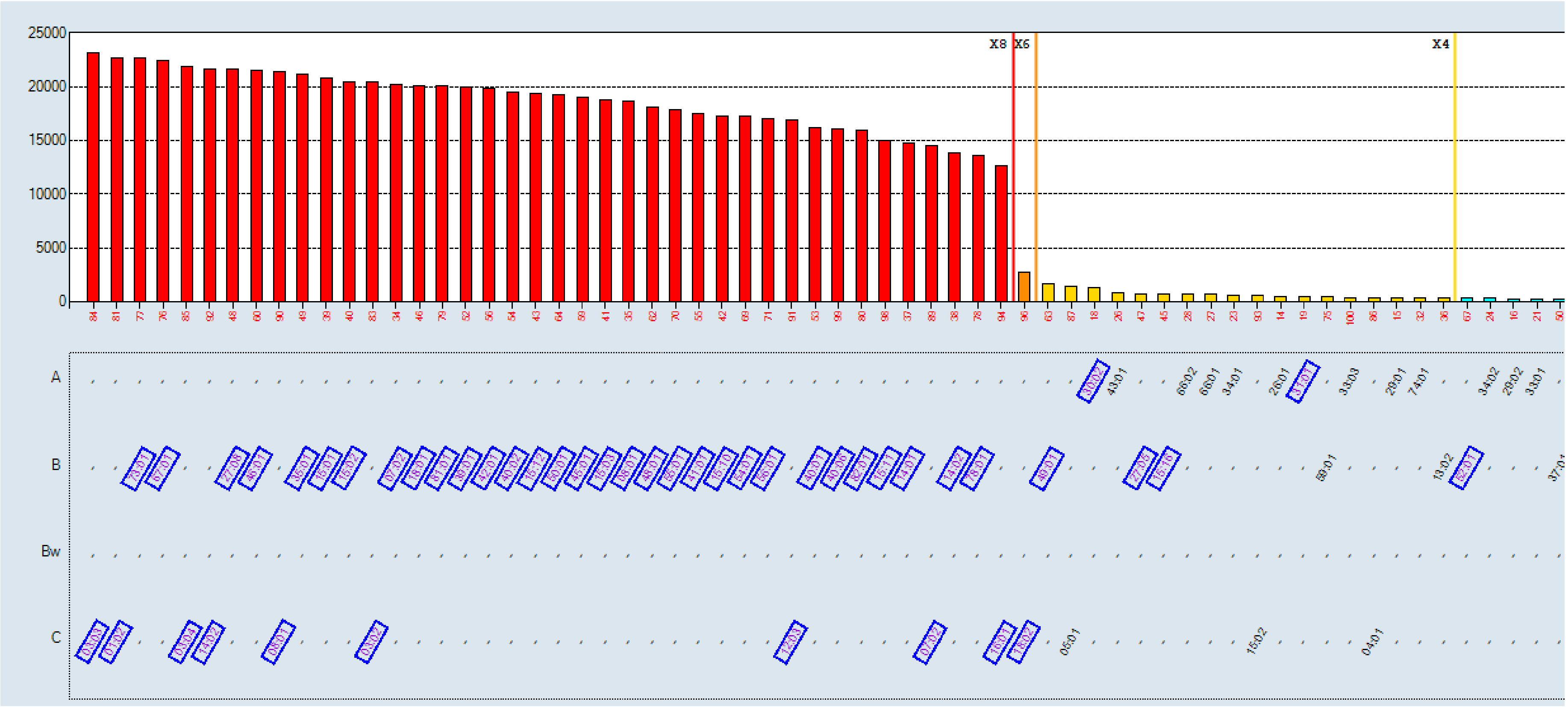
☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table | Latest Version | Combined

Row Count: 153

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verified	N. Imm Ab Verified	TP Ab Verified
B*44:02	B44,Bw4	057	B	8496	8334	23.45	POS	☐	1878	☐	☐		0			
		002		14388	4213	0.5		☐		☐	☐		0		0	
C*15:02	Cw15	093	C	4325	4163	11.95	POS	☐	1878	☐	☐		0			
C*16:02	Cw16	1057	C	5952	2194	1.11	POS	☐	1878	☐	☐		0			
B*13:01	B13,Bw4	097	B	2310	2175	8.11	POS	☐	1878	☐	☐		0			
C*03:02	Cw10	083	C	2025	1878	6.32	POS	☐	1878	☐	☐		0			
B*15:13	B77,Bw4	045	B	1174	1073	6.2	NEG	☐	1878	☐	☐		0			
C*03:04	Cw10	085	C	1185	1007	2.92	NEG	☐	1878	☐	☐		0			
B*15:02	B75,Bw6	041	B	859	730	3.19	NE									
B*44:03	B44,Bw4	058	B	462	324	1.59	NE									
C*17:01	Cw17	095	C	477	298	1.17	NE									
A*68:02	A68	030	A	493	269	0.92	NE									
A*31:01	A31	020	A	381	237	1.23	NE									
A*66:02	A66	028	A	344	207	1.18	NE									
B*67:01	B67,Bw6	076	B	335	196	1.13	NE									
A*30:02	A30	019	A	305	182	1.23	NE									
A*34:01	A34	023	A	300	158	0.99	NE									
B*07:14	B7,Bw6	1012	B	3978	157	0.46	NE									
B*53:01	B53,Bw4	068	B	284	145	0.96	NE									

Read LABScreen Analysis
解析画面でSAとSupplementをcombineした状態でMatchMakerを立ち上げ、クリックするとCombineしたデータを表示

Case Study

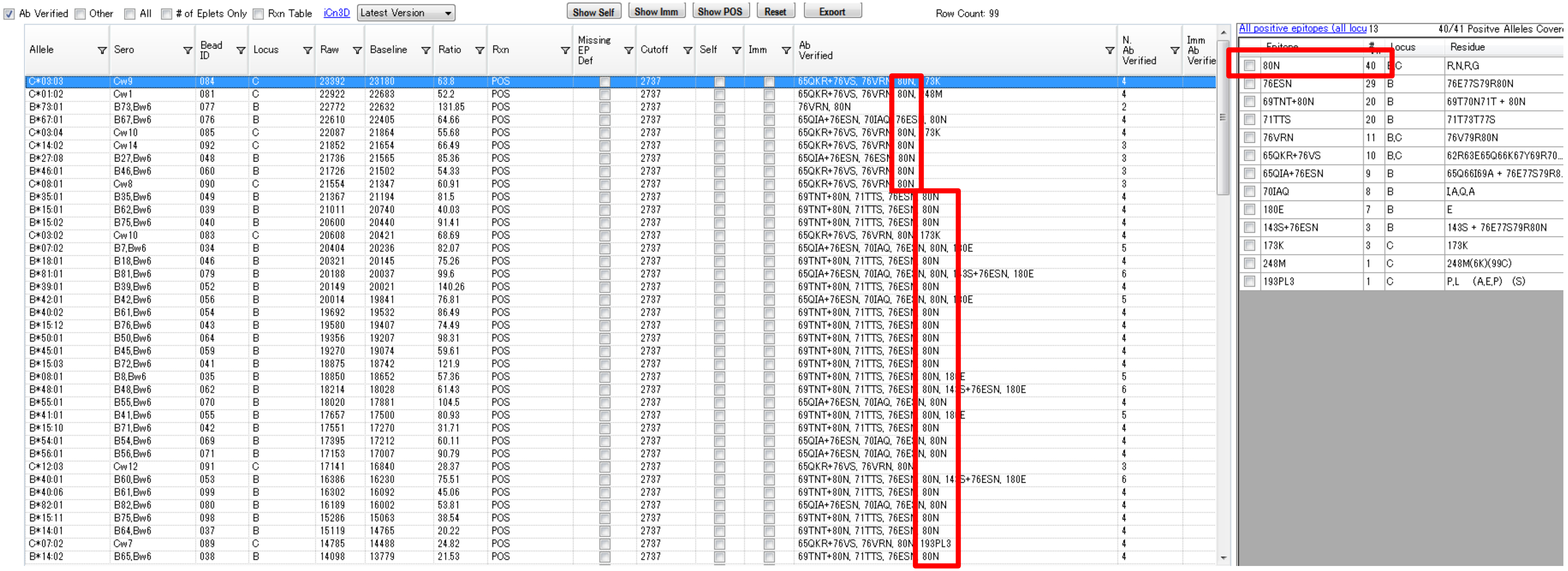


Final Assignment

Bw6 (B73 B67 B27 B46 B35 B62 B75 B7 B18 B81 B39 B42 B61 B76 B50 B45 B72 B8 B48 B55 B41 B71 B54 B56 B60 B82 B64 B65 B78)

Cw1 Cw7 Cw8 Cw9 Cw10 Cw12 Cw14 Cw16 Cw18

Case Study


☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version
Show Self
Show Imm
Show POS
Reset
Export

Row Count: 99

Allele	Sero	Bead ID	Locus	Raw	Baseline	Ratio	Rxn	Missing EP Def	Cutoff	Self	Imm	Ab Verified	N. Ab Verified	Imm Ab Verifie
C*03:03	Cw9	084	C	23392	23180	63.8	POS	☐	2737	☐	☐	65QKR+76VS, 76VR 80N, 73K	4	
C*01:02	Cw1	081	C	22922	22683	52.2	POS	☐	2737	☐	☐	65QKR+76VS, 76VR 80N, 48M	4	
B*73:01	B73,Bw6	077	B	22772	22632	131.85	POS	☐	2737	☐	☐	76VRN, 80N	2	
B*67:01	B67,Bw6	076	B	22610	22405	64.66	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ 76ES , 80N	4	
C*03:04	Cw10	085	C	22087	21864	55.68	POS	☐	2737	☐	☐	65QKR+76VS, 76VR 80N, 73K	4	
C*14:02	Cw14	092	C	21852	21654	66.49	POS	☐	2737	☐	☐	65QKR+76VS, 76VR 80N	3	
B*27:08	B27,Bw6	048	B	21736	21565	85.36	POS	☐	2737	☐	☐	65QIA+76ESN, 76ES 80N	3	
B*46:01	B46,Bw6	060	B	21726	21502	54.33	POS	☐	2737	☐	☐	65QKR+76VS, 76VR 80N	3	
C*08:01	Cw8	090	C	21554	21347	60.91	POS	☐	2737	☐	☐	65QKR+76VS, 76VR 80N	3	
B*35:01	B35,Bw6	049	B	21367	21194	81.5	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*15:01	B62,Bw6	039	B	21011	20740	40.03	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*15:02	B75,Bw6	040	B	20600	20440	91.41	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
C*03:02	Cw10	083	C	20608	20421	68.69	POS	☐	2737	☐	☐	65QKR+76VS, 76VRN, 80N 173K	4	
B*07:02	B7,Bw6	034	B	20404	20236	82.07	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N, 0E	5	
B*18:01	B18,Bw6	046	B	20321	20145	75.26	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*81:01	B81,Bw6	079	B	20188	20037	99.6	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N, 3S+76ESN, 180E	6	
B*39:01	B39,Bw6	052	B	20149	20021	140.26	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*42:01	B42,Bw6	056	B	20014	19841	76.81	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N, 0E	5	
B*40:02	B61,Bw6	054	B	19692	19532	86.49	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*15:12	B76,Bw6	043	B	19580	19407	74.49	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*50:01	B50,Bw6	064	B	19356	19207	98.31	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*45:01	B45,Bw6	059	B	19270	19074	59.61	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*15:03	B72,Bw6	041	B	18875	18742	121.9	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*08:01	B8,Bw6	035	B	18850	18652	57.36	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N, 18 E	5	
B*48:01	B48,Bw6	062	B	18214	18028	61.43	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N, 14 S+76ESN, 180E	6	
B*55:01	B55,Bw6	070	B	18020	17881	104.5	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N	4	
B*41:01	B41,Bw6	055	B	17657	17500	80.93	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N, 18 E	5	
B*15:10	B71,Bw6	042	B	17551	17270	31.71	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*54:01	B54,Bw6	069	B	17395	17212	60.11	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N	4	
B*56:01	B56,Bw6	071	B	17153	17007	90.79	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N	4	
C*12:03	Cw12	091	C	17141	16840	28.37	POS	☐	2737	☐	☐	65QKR+76VS, 76VRN, 80N	3	
B*40:01	B60,Bw6	053	B	16386	16230	75.51	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N, 14 S+76ESN, 180E	6	
B*40:06	B61,Bw6	099	B	16302	16092	45.06	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*82:01	B82,Bw6	080	B	16189	16002	53.81	POS	☐	2737	☐	☐	65QIA+76ESN, 70IAQ, 76E N, 80N	4	
B*15:11	B75,Bw6	098	B	15286	15063	38.54	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
B*14:01	B64,Bw6	037	B	15119	14765	20.22	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	
C*07:02	Cw7	089	C	14785	14488	24.82	POS	☐	2737	☐	☐	65QKR+76VS, 76VRN, 80N 193PL3	4	
B*14:02	B65,Bw6	038	B	14098	13779	21.53	POS	☐	2737	☐	☐	69TNT+80N, 71TTS, 76ES 80N	4	

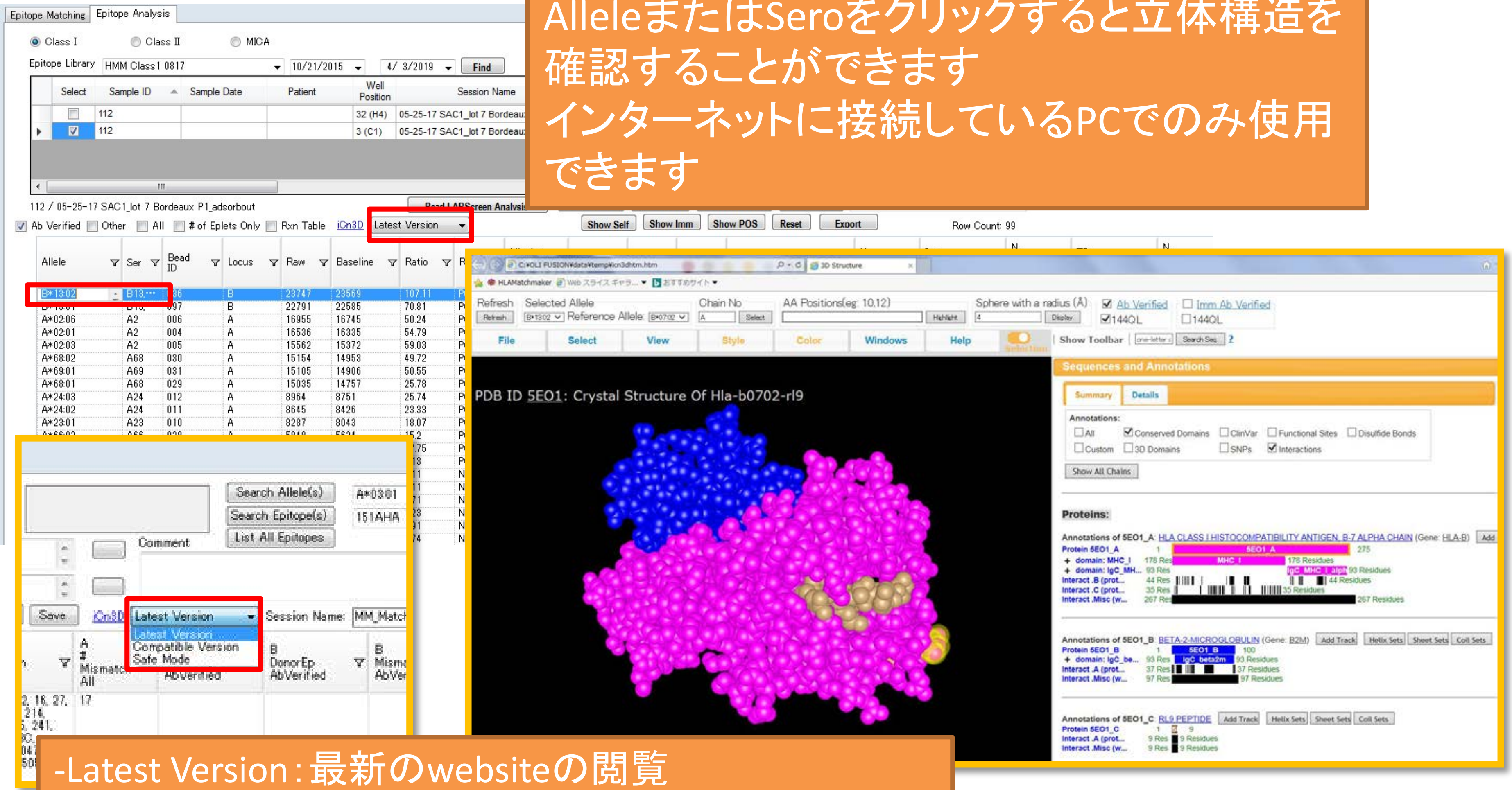
All positive epitopes (all locu 13　40/41 Positve Alleles Cover

	Epitope	#	Locus	Residue
☐	80N	40	B,C	R,N,R,G
☐	76ESN	29	B	76E77S79R80N
☐	69TNT+80N	20	B	69T70N71T + 80N
☐	71TTS	20	B	71T73T77S
☐	76VRN	11	B,C	76V79R80N
☐	65QKR+76VS	10	B,C	62R63E65Q66K67Y69R70...
☐	65QIA+76ESN	9	B	65Q66I69A + 76E77S79R8...
☐	70IAQ	8	B	I,A,Q,A
☐	180E	7	B	E
☐	143S+76ESN	3	B	143S + 76E77S79R80N
☐	173K	3	C	173K
☐	248M	1	C	248M(6K)(99C)
☐	193PL3	1	C	P,L　(A,E,P)　(S)

「80N」が多くのアレルに含まれていることが分かる

iCn3D表示機能

AlleleまたはSeroをクリックすると立体構造を確認することができます
インターネットに接続しているPCでのみ使用できます



Epitope Matching | Epitope Analysis

● Class I ○ Class II ○ MICA

Epitope Library: HMM Class1 0817 | 10/21/2015 | 4/ 3/2019 | Find

Select	Sample ID	Sample Date	Patient	Well Position	Session Name
☐	112			32 (H4)	05-25-17 SAC1_lot 7 Bordeau
☑	112			3 (C1)	05-25-17 SAC1_lot 7 Bordeau

112 / 05-25-17 SAC1_lot 7 Bordeaux P1_adsorbout

☑ Ab Verified ☐ Other ☐ All ☐ # of Eplets Only ☐ Rxn Table iCn3D Latest Version

Allele	Ser	Bead ID	Locus	Raw	Baseline	Ratio
B*13:02	B13,…	36	B	23747	23569	107.11
	B13,	097	B	22791	22585	70.81
A*02:06	A2	006	A	16955	16745	50.24
A*02:01	A2	004	A	16536	16335	54.79
A*02:03	A2	005	A	15562	15372	59.03
A*68:02	A68	030	A	15154	14953	49.72
A*69:01	A69	031	A	15105	14906	50.55
A*68:01	A68	029	A	15035	14757	25.78
A*24:03	A24	012	A	8964	8751	25.74
A*24:02	A24	011	A	8645	8426	23.33
A*23:01	A23	010	A	8287	8043	18.07

Search Allele(s) A*03:01
Search Epitope(s) 151AHA
List All Epitopes

Save iCn3D Latest Version / Latest Version / Compatible Version / Safe Mode — Session Name: MM_Match

PDB ID 5EO1: Crystal Structure Of Hla-b0702-rl9

Sequences and Annotations

Annotations of 5EO1_A: HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-7 ALPHA CHAIN (Gene: HLA-B)

Annotations of 5EO1_B: BETA-2-MICROGLOBULIN (Gene: B2M)

Annotations of 5EO1_C: RL9 PEPTIDE

Refresh
Selected Allele
Reference Allele
Chain No
AA Positions(eg: 10,12)
Sphere with a radius (Å)
Ab Verified
Imm Ab Verified
File
Select
View
Style
Color
Windows
Help
Show Toolbar
Summary
Details
Show All Chains
Proteins:

-Latest Version : 最新のwebsiteの閲覧
-Compatible Version : 機能が制限されたページの閲覧
-Safe Mode : 限られた機能のみでの閲覧