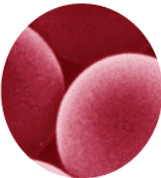
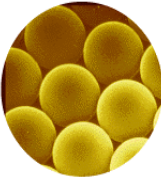
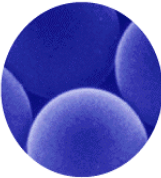
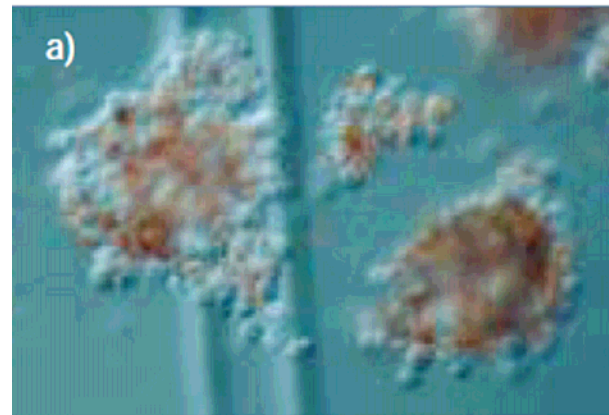


Regulatory T cellsの分離と増幅

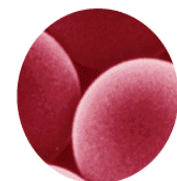
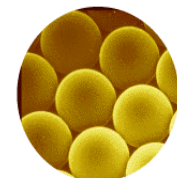
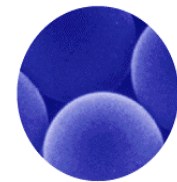
- DYNAL CD4⁺CD25⁺ Treg キット
- Dynabeads Human Treg Expander



1. DYNAL CD4⁺CD25⁺ Treg キット 特徴

ビーズも抗体も結合していないTreg 細胞を回収するキットです

- ・コンポーネント
 - Dynabeads CD4⁺ Negative Selection Kit
 - Dynabeads CD25⁺
 - DETACHaBEAD
- ・カラム不要
カラム洗浄や溶液の脱気等不要
カラム費用無し
- ・試料細胞数 1×10^7 個 100回分 / 1キット
- ・回収率良好
- ・高純度 T-reg ExpanderでExpansion可能



2. CD4⁺CD25⁺ Treg キット使用方法

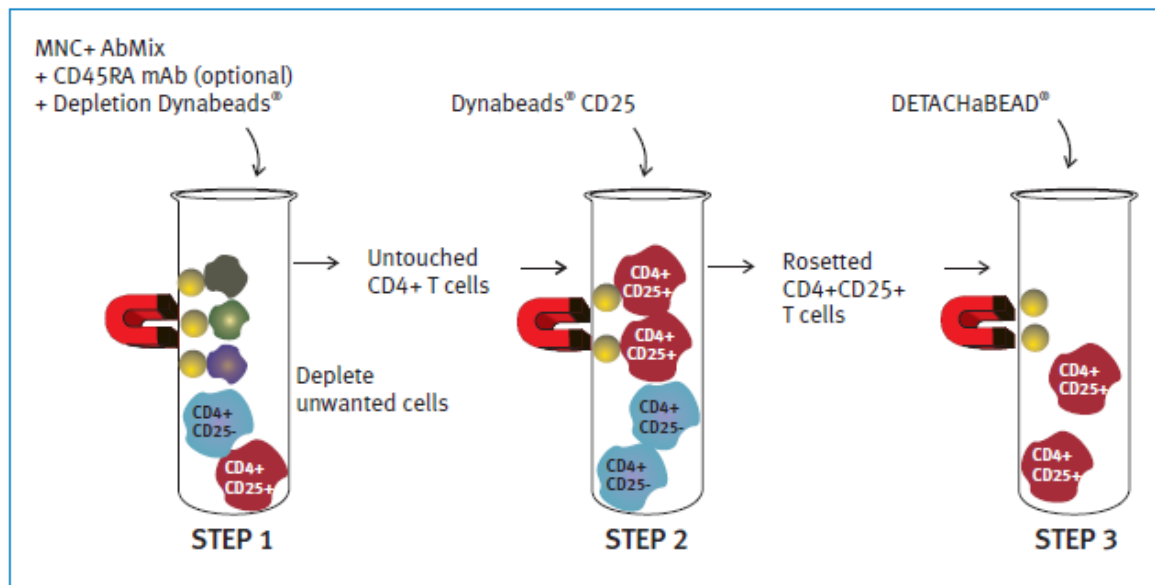
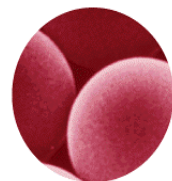
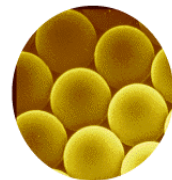
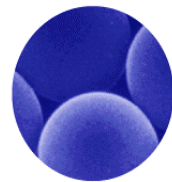


Fig. 1. Simple method for isolating bead-free human regulatory T cells.

1. ネガティブセレクションにより未標識のCD4⁺細胞を回収
2. 抗CD25抗体のついた磁気ビーズでCD4⁺CD25⁺ Tregをポジティブセレクション
3. デタッチャビーズを加え抗CD25抗体を外し、細胞表面に抗体が結合していないT-regを回収



3. 純度と回収率

• 高純度/高回収率

純度: 93-98%
回収率: 53-93%

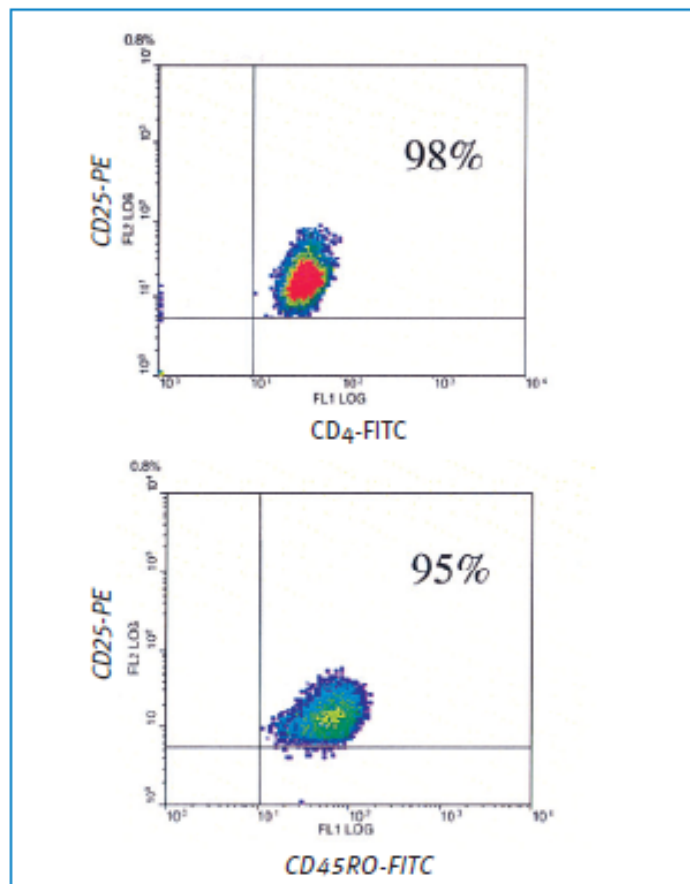
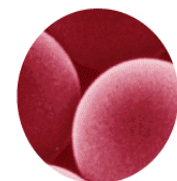
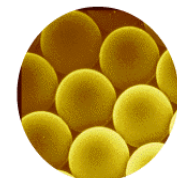
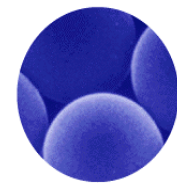


Fig. 3. The purity of CD4⁺CD25⁺ T cells and the percentage of CD25⁺CD45RO⁺ T cells after CD4⁺CD25⁺ T cell isolation (+ CD45RA mAb).



4. CD25⁺CD45RO⁺細胞の回収

抗CD45RA抗体を利用

高い抑制活性のあるTregを回収

抗CD45 RA抗体は別梱包

CD45⁺細胞を除去しない事も可能

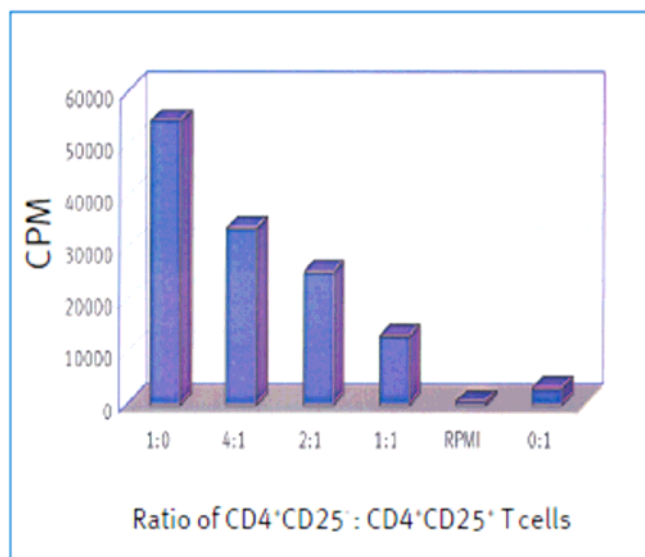


Fig. 4a. Isolated CD4⁺CD25⁺ T cells (+ CD45RA mAb) inhibit CD4⁺CD25⁻ T cells stimulated with cross-linked anti-CD3. In a ratio of CD4⁺CD25⁻ : CD4⁺CD25⁺ = 1:1, the inhibition is 88%.

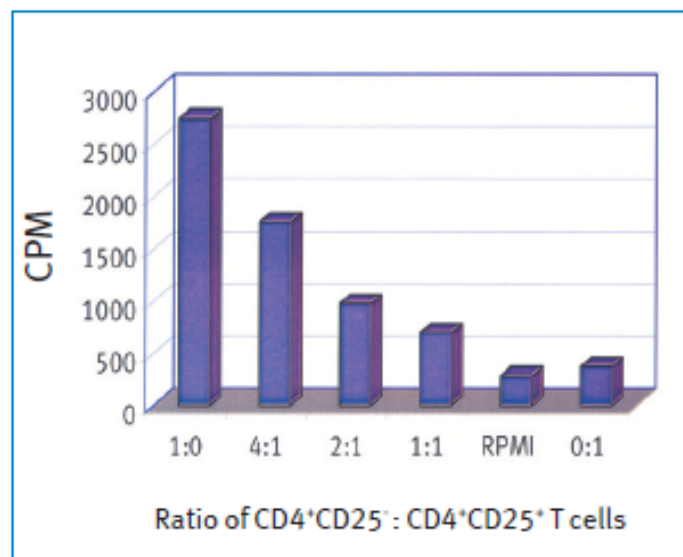
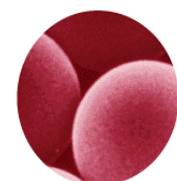
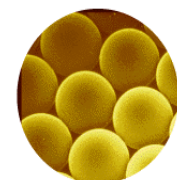
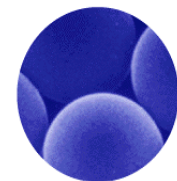
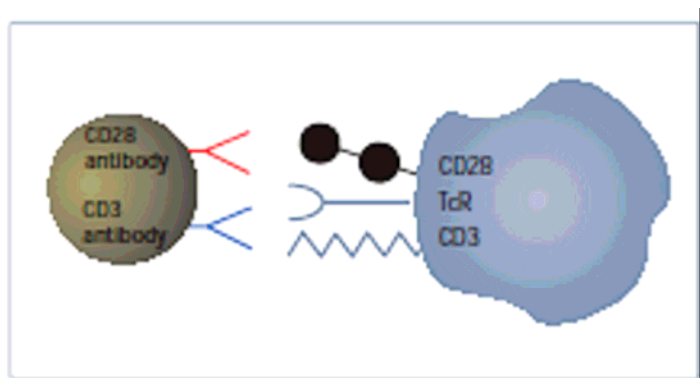


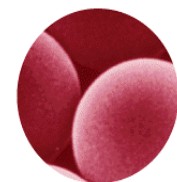
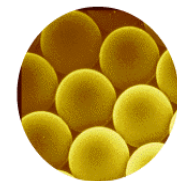
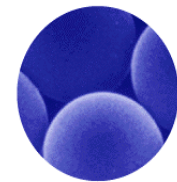
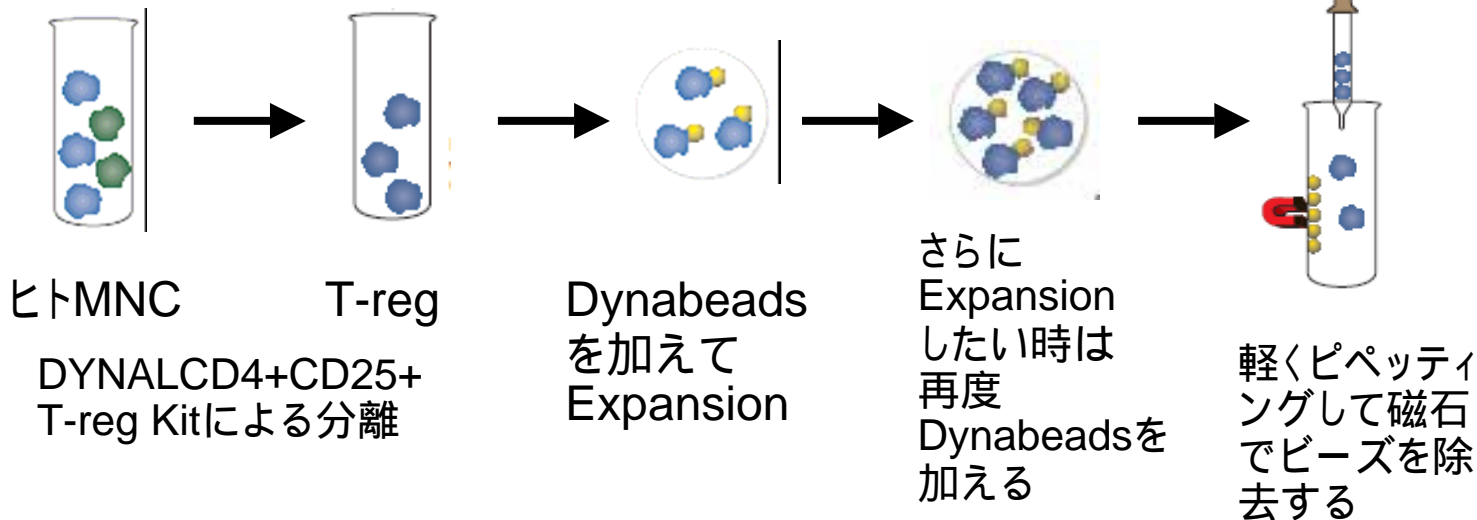
Fig. 4b. Isolated CD4⁺CD25⁺ T cells (- CD45RA mAb) inhibit CD4⁺CD25⁻ T cells stimulated with cross-linked anti-CD3. In a ratio of CD4⁺CD25⁻ : CD4⁺CD25⁺ = 1:1, the inhibition is 75%.



5. T reg Expander 概要



- ・ 抗CD3とCD28の抗体を結合させた4.5 μmの磁気ビーズ
- ・ 抗原提示細胞の代わりにT-Cellを刺激し増殖させる
(人工的抗原提示細胞)



6. Dynabeads T reg Expanderの特徴

抗CD3、CD28の抗体をビーズ上に共有結合済み

製造元の品質検査で増殖効率を確認済み

抗CD3抗体と抗CD28抗体の濃度・比率を最適化

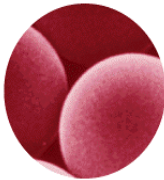
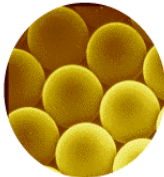
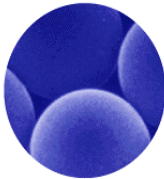
(Xcyte DynabeadのKnow how)

長い保存期間

ビーズと細胞の結合 ピペッティングで簡単に分離
増殖した細胞はビーズ抗体フリー

磁石で分離したビーズを回収

増殖した細胞は元の性質を維持(フェノタイプ、抑制作用)



7. Dynabeads T reg Expanderの性能

- ・ 1回の刺激で～100倍、2回の刺激で～1000倍に増殖可能
- ・ 1 well中のT reg細胞 (1×10^5 個) に20 μ L (1キット 100回分)

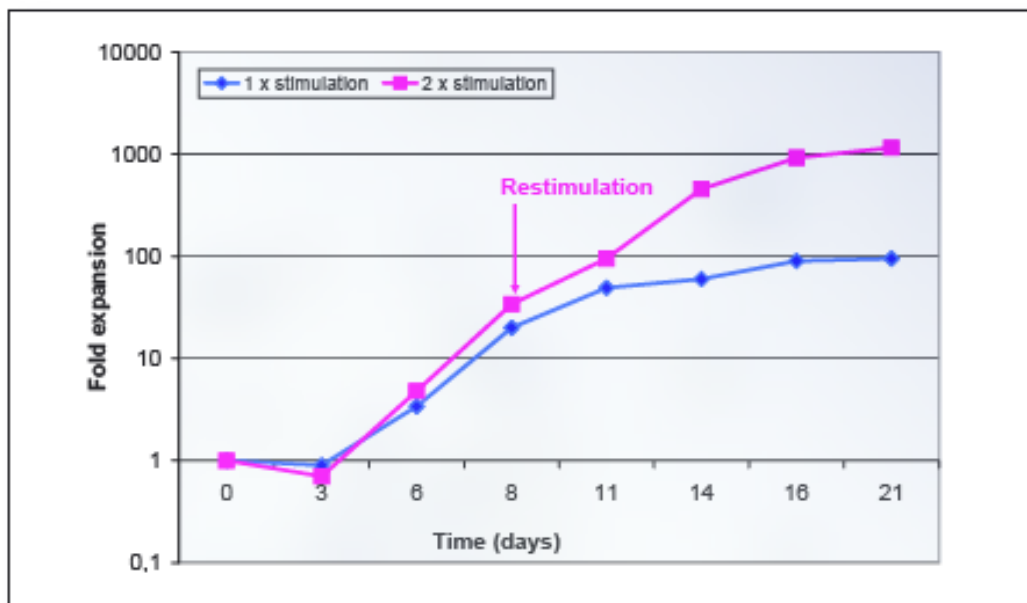


Fig. 1. Expansion of human *Treg* cells in 21 day cultures with Dynabeads[®] Human *Treg* Expander. 1000-fold expansion was obtained when the cultures were re-stimulated on day 8.

