

Dynabeads™ SARS-CoV-2 Spike

Catalog Numbers 18100D, 18100DFIVE

Pub. No. MAN0025848 Rev. A.0

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

Product description

Dynabeads™ SARS-CoV-2 Spike consists of superparamagnetic beads coupled with a trimeric spike protein. The spike protein is a patented recombinant trimeric structure combining the S1 subunit, including the receptor binding domain (RBD), and the S2 subunit found on the surface of SARS-CoV-2 viruses. The spike protein binds human host cells to initiate virus attachment, and to antibodies produced in response to a SARS-CoV-2 infection.

Dynabeads™ SARS-CoV-2 Spike can be used for the following applications:

- **Enzyme-Linked Immunosorbent Assay (ELISA)**

In contrast to traditional ELISAs where the spike protein is coupled to the bottom of a well, binding of antibodies to spike-coupled Dynabeads™ magnetic beads that are evenly distributed through the sample significantly reduces assay incubation time to only 45 minutes.

In addition, the use of magnetic beads facilitates automation, and running the assay on platforms such as the KingFisher™ Flex instrument, drastically reduces hands-on time since all incubations and washing steps are automated. The beads are also supplied as ready-to-use solid-phase indirect ELISA kits designed to detect and quantify the level of human SARS-CoV-2 IgG, IgM, or total Ig (IgA, IgG, and IgM) from serum and plasma samples (see “Related products” for ordering details). These stand-alone beads can be used for further optimization of the kits, or for setting up custom ELISAs.

- **ACE2 binding**

Because the spike protein binds host cells to initiate the SARS-CoV-2 virus entrance into epithelial cells of the lungs via human Angiotensin-Converting Enzyme 2 (ACE2), the magnetic beads can be used for isolation of ACE2+ cells or ACE2 protein purification (protocols currently not available).

Contents and storage

Contents	Cat. No. 18100D	Cat. No. 18100DFIVE	Storage
Dynabeads™ SARS-CoV-2 Spike [1]	3 mL	5 × 3 mL	2°C to 8°C. Do not freeze.

[1] The beads are supplied at a concentration of 1 mg/mL in 0.05 M Tris-Buffered Saline (TBS) with 0.1% Tween-20 and 0.02% Na₃N.

Required materials not supplied

- DynaMag™ -2 Magnet (see [thermofisher.com/magnets](https://www.thermofisher.com/magnets) for all magnet offerings)
- Mixer or shaker (e.g., HulaMixer™ Sample Mixer)
- For materials required to perform ELISA, see the instructions for the Dynabeads™ SARS-CoV-2 Spike ELISA kits.

Related products

Unless otherwise indicated, all materials are available through [thermofisher.com](https://www.thermofisher.com).

Product	Catalog No.
KingFisher™ Flex Instrument	24074420
HulaMixer™ Sample Mixer	15920D
DynaMag™-96 Side Magnet	12331D
DynaMag™-96 Side Skirted Magnet	12027
DynaMag™-2 Magnet	12321D
Dynabeads™ SARS-CoV-2 Spike IgG ELISA Kit	18000D
Dynabeads™ SARS-CoV-2 Spike IgM ELISA Kit	18010D
Dynabeads™ SARS-CoV-2 Spike Ig Total ELISA Kit	18020D



The information in this guide is subject to change without notice.

DISCLAIMER: TO THE EXTENT ALLOWED BY LAW, THERMO FISHER SCIENTIFIC INC. AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT.

Revision history: Pub. No. MAN0025848

Revision	Date	Description
A.0	10 November 2021	New manual for Dynabeads™ SARS-CoV-2 Spike.

Important Licensing Information: These products may be covered by one or more Limited Use Label Licenses. By use of these products, you accept the terms and conditions of all applicable Limited Use Label Licenses.

©2021 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified.