

SARS-CoV-2 (COVID-19) Spike protein RBD-coupled magnetic beads

Cat. No. RBD-002M **Lot. No.** (See product label)

SPECIFICATION

Product Overview

The pre-coupled magnetic beads coupled with biotinylated SARS-CoV-2 Spike RBD protein to streptavidin conjugated magnetic beads, which can capture the Anti-SARS-CoV-2 antibody or ACE2 protein from cell or serum sample. The beads are in uniform size, narrow size distribution with large surface area and unique surface coating, which can help you get the best performance and highly reproducible results. This very first SARS-CoV-2 Spike protein RBD-coupled magnetic beads will bring great convenience with minimum non-specific binding and developed protocols. This ready to use products could greatly save your time and hassle.

Species

SARS-CoV-2

Beads Size

2 mg

Particle size

2 μ m

Coupled amount of protein

80 μ g

Capacity

> 200 nmol / mg beads > 40 μ g anti-SARS2-CoV-2 S1 antibody / mg beads > 40 μ g ACE2 protein / mg beads

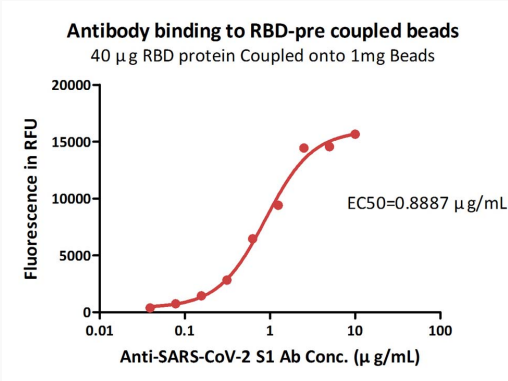
Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, 0.05% Tween-20, pH7.4, with 10% trehalose

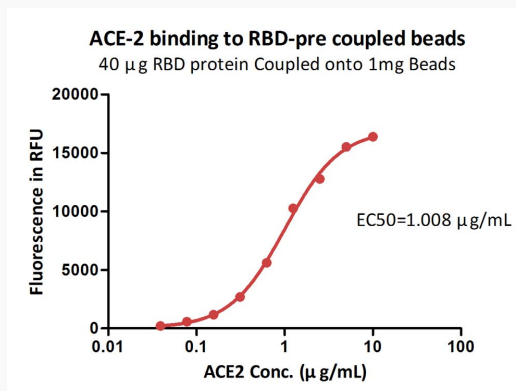
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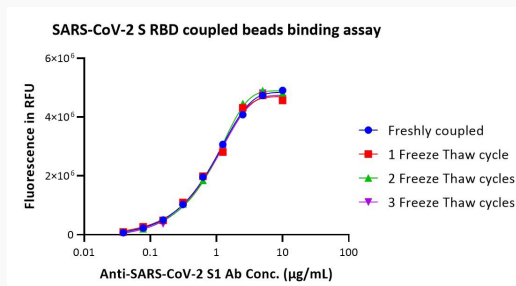
 45-1 Ramsey Road, Shirley, NY 11967, USA

Reconstitution	2 mL ultrapure water (1mg beads/mL)																		
Application	This product is intended for immunocapture, biopanning and flow cytometry.																		
Storage	Upon receipt, please store the Beads at -20°C for 1 year in lyophilized state. Once the Beads reconstitution, please use it immediately. Do not to freeze thaw the Beads after reconstitution.																		
Assay Principles	The Antigen pre-Coupled magnetic beads are Coupled with Biotinylated protein onto streptavidin (SA) magnetic beads. Because Streptavidin (SA) has an extraordinarily high affinity for biotin with a dissociation constant (Kd) on the order of 10-14 mol/L, the Biotinylated protein can bind to the SA beads irreversibly. We provide the SARS-CoV-2 Spike protein RBD coupled magnetic beads, which could help you to capture the antibody or ACE-2 protein, and easily to follow up with other tests, such as immunocapture, biopanning and flow cytometry.																		
Application Method	a) Reconstitute the Beads following the COA, wash the Beads and suspended to a certain concentration by adding assay Buffer. b) Add your antibody or ACE-2 protein to the beads, incubation and wash the beads.																		
	 Antibody binding to RBD-pre coupled beads 40 µg RBD protein Coupled onto 1mg Beads The graph shows a sigmoidal binding curve. The y-axis is 'Fluorescence in RFU' ranging from 0 to 20,000. The x-axis is 'Anti-SARS-CoV-2 S1 Ab Conc. (µg/mL)' on a logarithmic scale from 0.01 to 100. The curve starts near zero at 0.01 µg/mL, rises sharply between 0.1 and 1 µg/mL, and plateaus around 16,000 RFU at 10 µg/mL. The EC50 is indicated as 0.8887 µg/mL. <table border="1"> <caption>Approximate data points from the binding curve</caption> <thead> <tr> <th>Anti-SARS-CoV-2 S1 Ab Conc. (µg/mL)</th> <th>Fluorescence in RFU</th> </tr> </thead> <tbody> <tr><td>0.01</td><td>~100</td></tr> <tr><td>0.05</td><td>~1000</td></tr> <tr><td>0.1</td><td>~2000</td></tr> <tr><td>0.5</td><td>~8000</td></tr> <tr><td>1.0</td><td>~10000</td></tr> <tr><td>2.0</td><td>~14000</td></tr> <tr><td>5.0</td><td>~15500</td></tr> <tr><td>10.0</td><td>~16000</td></tr> </tbody> </table>	Anti-SARS-CoV-2 S1 Ab Conc. (µg/mL)	Fluorescence in RFU	0.01	~100	0.05	~1000	0.1	~2000	0.5	~8000	1.0	~10000	2.0	~14000	5.0	~15500	10.0	~16000
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Immobilized 40 µg SARS-CoV-2 S protein RBD to 1mg Beads, can bind the Anti-SARS-CoV-2 Spike S1 Antibody with an EC50 of 0.8887 µg/mL.



Immobilized 40 µg SARS-CoV-2 S protein RBD to 1mg Beads, can bind the Human ACE2, Fc Tag with an EC50 of 1.008 µg/mL.



The binding curves between SARS-CoV-2 S RBD pre-coupling magnetic beads after different freeze-thaw cycles and anti-SARS-CoV-2 S1 antibody. 0.1 mg of Beads (1 mg/mL, 100 µL) was washed three times and the supernatant was removed. 100 µL antibodies of the corresponding concentration (10 µg/mL-0.039 µg/mL) were added. Fluorescent labeled secondary antibody was added for

detection.

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