

# Active Recombinant SARS-CoV-2 Spike RBD Protein, His-tagged, Alexa Fluor® 488 conjugated

**Cat. No.** S-2002S    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant SARS-CoV-2 Alexa Fluor® 488 conjugated Spike RBD (Arg319-Phe541) protein with a C-terminal 6-His tag was expressed in human embryonic kidney cell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | SARS-CoV-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped, positive-sense, single-stranded RNA virus that causes coronavirus disease 2019 (COVID-19). Virus particles include the RNA genetic material and structural proteins needed for invasion of host cells. Once inside the cell the infecting RNA is used to encode structural proteins that make up virus particles, nonstructural proteins that direct virus assembly, transcription, replication and host control and accessory proteins whose function has not been determined.~ The structural proteins of SARS-CoV-2 include the envelope protein (E), spike or surface glycoprotein (S), membrane protein (M) and the nucleocapsid protein (N). The spike glycoprotein is found on the outside of the virus particle and gives coronavirus viruses their crown-like appearance. This glycoprotein mediates attachment of the virus particle and entry into the host cell. S protein is an important target for vaccine development, antibody therapies and diagnostic antigen-based tests. |
| <b>Form</b>             | Labeled with Alexa Fluor® 488 via amines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                                     |                                                                                                                                                                                                                                                                                                               |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                                                                                                                                                              |
| <b>Bio-activity</b>                 | Measured by flow cytometry for its ability to bind HEK293 human embryonic kidney cells transfected with human ACE-2 at 0.50-3.00 µg/mL (100 µL/well).                                                                                                                                                         |
| <b>Molecular Mass</b>               | 26 kDa                                                                                                                                                                                                                                                                                                        |
| <b>N-terminal Sequence Analysis</b> | Arg319                                                                                                                                                                                                                                                                                                        |
| <b>Endotoxin</b>                    | < 1.0 EU/ µg of the protein by the LAL method.                                                                                                                                                                                                                                                                |
| <b>Purity</b>                       | > 95% by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.                                                                                                                                                                                                  |
| <b>Storage</b>                      | Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.<br>6 months from date of receipt, -20 to -70 centigrade as supplied.<br>1 month, 2 to 8 centigrade under sterile conditions after opening.<br>3 months, -20 to -70 centigrade under sterile conditions after opening. |
| <b>Storage Buffer</b>               | Supplied as a 0.2 µm filtered solution in PBS with BSA as a carrier protein.                                                                                                                                                                                                                                  |
| <b>Shipping</b>                     | The product is shipped with dry ice or equivalent.                                                                                                                                                                                                                                                            |
| <b>Conjugation</b>                  | Alexa Fluor 488                                                                                                                                                                                                                                                                                               |

## GENE INFORMATION

**Gene Name** S surface glycoprotein [ Severe acute respiratory syndrome coronavirus 2 ]

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|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Official Symbol</b> | <b>S</b>                                                                                                                                                                                                                      |
| <b>Synonyms</b>        | S; surface glycoprotein; spike glycoprotein; surface glycoprotein; structural protein; spike protein                                                                                                                          |
| <b>Gene ID</b>         | <b>43740568</b>                                                                                                                                                                                                               |
| <b>Protein Refseq</b>  | <b>YP_009724390</b>                                                                                                                                                                                                           |
| <b>FC</b>              | HEK293 human embryonic kidney cells transfected with human ACE-2 were stained with (A) 1 µg/mL (100 µL/well) Recombinant SARS-CoV-2 Spike RBD His-tag Alexa Fluor® 488 Protein or (B) unstained.                              |
| <b>SDS-PAGE</b>        | 2 µg/lane of Recombinant SARS-CoV-2 Spike RBD Alexa Fluor® 488 Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 28-38 kDa. |