Miltenyi Biotec

Recombinant SARS-CoV-2 Spike-S1 (HEK)

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1. Description

Products Recombinant SARS-CoV-2 Spike-S1 (HEK) or Recombinant SARS-CoV-2 Spike-S1 (HEK)-Biotin.

Productname	Content	Order no.
Recombinant SARS-CoV-2 Spike-S1 (HEK)	10 µg	130-127-852
Recombinant SARS-CoV-2 Spike-S1 (HEK)	50 µg	130-127-854
Recombinant SARS-CoV-2 Spike-S1 (HEK)-Biotin	25 µg	130-127-853

Functional testing Binding of Recombinant SARS-CoV-2 Spike-S1 (HEK)-Biotin to ACE2 expressing cells was confirmed by flow cytometry.

Primary structure Recombinant SARS-CoV-2 Spike-S1 (HEK): Single, glycosylated polypeptide chain (699 amino acid residues) without N-terminal methionine. C-terminal His-tag and AviTag™.

Recombinant SARS-CoV-2 Spike-S1 (HEK)-Biotin: Monobiotinylated, glycosylated polypeptide chain (699 amino acid residues) without N-terminal methionine. C-terminal His-tag and AviTag.

Molecular mass 78.0 kDa.

Source Produced in human embryonic kidney cells.

Product format Lyophilized from a filtered (0.2 µm) buffer solution.

Stabilizer Mannitol and trehalose.

Purity >90% as determined by SDS-PAGE analysis.

Endotoxin level For Recombinant SARS-CoV-2 Spike-S1: Low endotoxin (<0.1 EU/µg protein) as determined by Limulus Amebocyte Lysate (LAL) assay.

For Recombinant SARS-CoV-2 Spike-S1 (HEK)-Biotin: Low endotoxin (<1.0 EU/µg protein) as determined by Limulus Amebocyte Lysate (LAL) assay.

Storage Lyophilized SARS-CoV-2 Spike-S1 should be stored at –20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at –20 °C or below. Avoid repeated freeze-thaw cycles.

Reconstitution It is recommended to reconstitute lyophilized SARS-CoV-2 Spike-S1 with deionized, sterile-filtered water to a final concentration of 0.02–0.25 mg/mL in a minimal volume of 200 µL.

1.1 Background information

The native SARS-CoV-2 spike glycoprotein (S) mediates the entry of the virus into target cells via its interaction with the angiotensin-converting enzyme 2 (ACE2) receptor, thereby initiating the infection. It forms a homotrimeric structure on the surface of the SARS-CoV-2 virus and represents the major target for diagnostic and therapeutic agents. The ectodomain of the S glycoprotein comprises the N-terminal S1 subunit, including the receptor binding domain, and the C-terminal S2 subunit.
The Recombinant SARS-CoV-2 Spike-S1 (HEK) covers the S1 domain of the viral surface protein including amino acids V16 to P681 of the native S glycoprotein. The recombinant protein is extended at its C-terminus with a His-tag and an AviTag.
The Recombinant SARS-CoV-2 Spike-S1 (HEK)-Biotin is specifically biotinylated at a single site, preserving full functionality of the protein.

1.2 Applications

The product can be used for a variety of applications, including:

- Analysis of SARS-CoV-2 immune responses
- Detection and characterization of SARS-CoV-2–specific antibodies
- Studying SARS-CoV-2 cell binding, infection, and viral life cycle

The optimal concentration for a specific application should be determined by a dose-response experiment.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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140-006-144.01

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140-006-144.01

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