

Product Specification Sheet

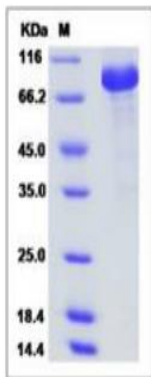
**Cat #** SARSS15-R-10

Recombinant (HEK) SARS Coronavirus Spike S1 protein (His-tag)

**SIZE:** 10 ug

Enveloped viruses access their host cells by a process of membrane fusion that is mediated by a specific fusion, or “spike” protein, encoded by the virus and embedded in the viral envelope. The coronavirus spike protein (S) mediates both receptor binding (via the S1 domain) and membrane fusion (via the S2 domain) and shows many features of conventional class I fusion proteins, including the presence of distinct heptad repeats within the fusion domain. SARS-CoV is an enveloped, single and positive-stranded RNA virus. Cell entry of severe acute respiratory syndrome coronavirus (SARS-CoV) is mediated by the viral spike (S) protein. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. For viral entry, the surface unit (S1) of SARS S binds to the cellular receptor angiotensin converting enzyme 2 (ACE2) and the transmembrane unit (S2) then fuses the viral membrane with a host cell membrane. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity, during infection with SARS-CoV. Because the S protein of SARS-CoV is involved in receptor recognition, as well as virus attachment and entry, it represents one of the most important targets for the development of SARS vaccines and therapeutics.

**Source of Antigen**



Recombinant (HEK) S1 subunit of SARS-CoV (isolate:WH20) spike comprises 665 amino acids and was expressed with a C-terminal polyhistidine tag. It has a predicted molecular mass of 74.4 kDa. The apparent molecular mass of the protein is approximately 85.8 kDa in SDS-PAGE under reducing conditions. Purified protein is supplied in PBS (pH 7.4), 5% Trehalose, 5% mannitol and 0.01% Tween-80 as preservative. (see lot sp. Conc. on the vial)

It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

**Endotoxin level :** < 1.0 EU per µg protein as determined by the LAL method.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4°C.

**Long-term:** at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting:** load 20-100 ng/well.

**ELISA** (50-100 ng antigen/well).

**Histochemistry & Immunofluorescence:** not tested.

**References:** .Shen S, et al. (2007). Methods Mol Biol. 379: 127-35. 2.Du L, et al. (2009) Nat Rev Microbiol. 7 (3): 226-36.

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog#	Description		
RP-1420	Recombinant	(E.Coli)	SARS
	Associated Coronavirus Nucleocapsid (340-390)		
RP-1418	Recombinant	(E.Coli)	SARS
	Associated Coronavirus Envelope		
RP-1417	Recombinant	(E.Coli)	SARS
	Associated Coronavirus Matrix		
RP-1419	Recombinant	(E.Coli)	SARS
	Associated Coronavirus Nucleocapsid (1-49)		
RP-1421	Recombinant	(E.Coli)	SARS
	Associated Coronavirus Nucleocapsid (1-49,192-220)		
AR-273-U	SARS coronavirus NTPase/Helicase		(ES15-1), RNA Aptamer, unlabeled

SARSS15-R-10

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