

SARS-ACSM(M) (residues 408-470, 540-573)

SARS-Associated Coronavirus Spike Mosaic S(M)

recombinant, *E. coli*

Cat. No.	Amount
PR-1106	100 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 50 mM Tris-HCl, 60 mM NaCl and 50% glycerol.

Application

Recombinant SARS-ACSM Antigen may be used in ELISA and Western blots, excellent for detection of SARS with minimal specificity problems.

Specificity

Immunoreactive with sera of SARSinfected individuals.

Purity

>95% by SDS-PAGE (coomassie staining) and RP-HPLC.

Description

SARS-ACSM contains the middle section of the Spike protein immunodominant fragments, amino acids: 408-470, 540-573.

SARS-ACSM is purified by proprietary chromatographic techniques.

Background

The spike (S) glycoprotein of coronaviruses mediates viral entry into host cells.

Spike (S)-glycoprotein of the virus interacts with a cellular receptor and mediates membrane fusion to allow viral entry into susceptible target cells. It is a type 1 viral fusion protein that characteristically contains two heptad repeat regions, denoted HR-N and HR-C, that form coiled-coil structures within the ectodomain of the protein. Previous studies have shown that the two heptad repeat regions can undergo a conformational change from their native state to a δ -helix bundle (trimer of dimers), which mediates fusion of viral and host cell membranes .

Selected References:

- Xu Y. et al. (2004) Characterization of the heptad repeat regions, HR1 and HR2, and design of a fusion core structure model of the spike protein from severe acute respiratory syndrome (SARS) coronavirus. *Biochemistry*. **43**:14064
- Hsu C.H. et al. (2004) Immunological, structural, and preliminary Xray diffraction characterizations of the fusion core of the SARS coronavirus spike protein. *Biochem Biophys Res Commun*. **324**:761
- He Y. et al. (2004) Identification of immunodominant sites on the spike protein of severe acute respiratory syndrome (SARS) coronavirus: implication for developing SARS diagnostics and vaccines. *J Immunol*. **173**:4050
- Bukreyev A. et al. (2004) Mucosal immunisation of African green monkeys (*Cercopithecus aethiops*) with an attenuated parainfluenza virus expressing the SARS coronavirus spike protein for the prevention of SARS. *Lancet*. **363**:2122
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