

Recombinant Spike protein S1 (aa 1-725) (Human betacoronavirus 2c EMC/2012)

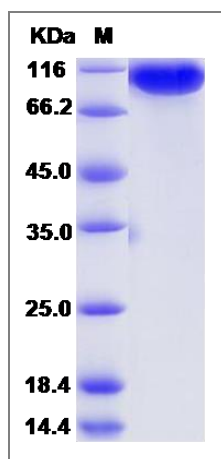


Sino Biological Inc.
Biological Solution Specialist

Catalogue Number: 40069-V08H

General Information

Protein name	S protein (Human betacoronavirus 2c EMC/2012)
Synonyms	S
Protein Construction	A DNA sequence encoding the spike protein S1 (Human betacoronavirus 2c EMC/2012)(AFS88936.1) (Met1-Glu725) was fused with a polyhistidine tag at the C-terminus.
Expression Host	Human Cells
Predicted N terminal	Tyr 18
Molecular Mass	The recombinant spike protein S1 (Human betacoronavirus 2c EMC/2012) comprises 719 amino acids and has a predicted molecular mass of 79.9 kDa. It migrates as an approximately 94 kDa band in SDS-PAGE under reducing conditions.
Purity	> 95 % as determined by SDS-PAGE.
Endotoxin Level	< 1.0 EU per 1µg cytokine as determined by the LAL method.
Formulation	Supplied as sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% glycerol.
SDS-PAGE	



Usage Guide

Reconstitution	Sample is ready to use. Centrifuge the vial at 4°C before opening to recover the entire contents.
Storage	Store it under sterile conditions at -70°C. It is recommended that the protein be aliquoted and be used as soon as possible.
Avoid repeated freeze-thaw cycles.	

Protein Description

The viral particles of all influenza viruses are similar in composition. These are made of a viral envelope containing two main types of glycoproteins, wrapped around a central core. The central core contains the viral RNA genome and other viral proteins that package and protect it from nucleases. The influenza A genome contains 11 genes on eight pieces of RNA, encoding for 11 proteins: Hemagglutinin (HA), Neuraminidase (NA), Nucleoprotein (NP), M1, M2, NS1, NS2(NEP), PA, PB1, PB1-F2 and PB2. Influenza A virus nucleoprotein (NP) forms homo-oligomers and wrap around genomic RNA, along with a trimeric polymerase making up ribonucleoprotein (RNP) complex which serves as template for transcription and replication. NP is composed of a head and a body domain and a tail loop/ linker region. The head domain is more conserved than the body domain. NP oligomerization is mediated by the insertion of the non-polymorphic and structurally conserved tail loop of one NP molecule to a groove of another NP. The different form of NP oligomers is due to the flexibility of the polymorphic linkers that join the tail loop to the rest of the protein. NP comprises at least 2 nuclear localization signals and is responsible of the active RNP import into the nucleus through the cellular importin alpha/beta pathway. Viral proteins NEP, M1, M2 may be involved in the process of nucleus export of RNP in the infection cycle.

Reference

1. Li KS, et al., 2004, Nature. 430: 209-13.
2. Epstein, S.L. et al., 2005, Vaccine. 23 (46-47): 5404-10.
3. Christophe F, et al., 2009, Science. 324: 1557-61.
4. Guan Y, et al., 2009, Revue scientifique et technique. 23(2): 453-65.
5. Ng, A.K. et al., 2009, Sci China C Life Sci. 52 (5):439-49.

Amino Acid Sequence

YVDVGPDSVKSACIEVDIQQTFFDKTWPRPIDVSKADGIIYPQGRITYSNITITYQGLFPYQGDHGD MYVYSAGHATGTT P
QKLFVANYSQDVKQFANGFVVRIGAAANSTGTVIIISPSTSATIRKIYPAFMLGSSVGNFSDGKMGRFFNHTLVLLPDGCG
TLLRAFYCILEPRSGNHCPAGNSYTSFATYHTPATDCSDGNYNRNASLNSFKEYFNLRNCTFMYTYNITEDEILEWFGIT
QTAQGVHLFSSRYVDLYGGNMFQFATLPVYDTIKYYSIIIPHSIRSIQSDRKAWAAFVYKQLQPLTFLLD FSVDGYIRRAI
DCGFNDLSQLHCSYESFDVESGVYSVSSFEAKPSGSVVEQAEGVECDFSPLLSGTTPPVYNFKRLVFTNCNYNLTKLLSL
FSVNDFTCSQISPAAIASNCYSSLILDYFSYPLSMKSDLSVSSAGPISQFNKQSF SNPTCLILATVPHNLTTITKPLKY
SYINKCSRLLSDDRTEVPQLVNANQYSPCVSIVPSTVWEDGDYRKQLSPLEGGGWLVASGSTVAMTEQLQMGGFITVQY
GTDNTNSVCPKLEFANDTKIASQLGNCVEYSLYGVSGRGVFNCTAVGVRQQR FVYDAYQNLVGYYSDDGNYCYCLRACVSV
PVSVIYDKETKTHATLFGSVACEHISSTMSQYSRSTRSMLKRRDSTYGPLQTPVGCVLGLVNSSLFVEAHHHHHHHHHH