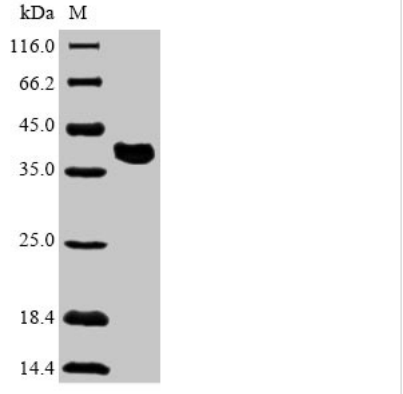
Recombinant Zaire ebolavirus Polymerase cofactor VP35 (VP35)

Product Code	CSB-MP764950ZAT
Relevance	Acts as a polymerase cofactor in the RNA polymerase transcription and replication complex. Prevents establishment of cellular antiviral state by blocking virus-induced phosphorylation and activation of interferon regulatory factor 3 (IRF3), a transcription factor critical for the induction of interferons alpha and beta. This blockage is produced through the interaction with and inhibition host IKBKE and TBK1 producing a strong inhibition of the phosphorylation and activation of IRF3. Also inhibits the antiviral effect mediated by the interferon-induced, double-stranded RNA-activated protein kinase EIF2AK2/PKR
Abbreviation	VP35
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q6V1Q9
Product Type	Recombinant Protein
Immunogen Species	Zaire ebolavirus (strain Kikwit-95) (ZEBOV) (Zaire Ebola virus)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MTTRTKGRGHTAATTQNDRMPGPELSGWISEQLMTGRIPVSDIFCDIENNPGL CYASQMQQTKPNPKTRNSQTQTDPICNHSFEEVVQTLASLATVVQQQTIASES LEQRITSLENGLKPVYDMAKTISSLNRVCAEMVAKYDLLVMTTGRATATAAATE AYWAEHGQPPPGPSLYEESAIRGKIESRDETVPQSVREAFNNLDSTTSLTEEN FGKPDISAKDLRNIMYDHLPGFGTAFHQLVQVICKLGKDSNSLDIIHAEFQASLA EGDSPQCALIQITKRVPIFQDAAPPVIHIRSRGDIPRACQKSLRPVPPSPKIDRG WVCVFQLQDGKTLGLKI
Lead Time	3-7 business days
Research Area	others
Source	Mammalian cell
Gene Names	VP35
Protein Names	Recommended name: Polymerase cofactor VP35
Expression Region	1-340aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	41.4kDa

Protein Description Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The Recombinant Zaire Ebola virus VP35 protein is a protein encoded by recombinant DNA that was cloned in an expression vector that supported the expression of VP35 gene. This recombinant VP35 protein was expressed in the host. The expression region is 1-340aa of the Zaire Ebola virus VP35. In the production, the expression vector contains N-terminal 10xHis tag and C-terminal Myc tag. Every production step was performed with a strict QC system. The purity of this protein is 90%+ determined by SDS-PAGE.

VP35, an essential viral RNA-dependent RNA polymerase cofactor, is indispensable for Ebola viral replication and host innate immune escape. VP35 was demonstrated to be phosphorylated at Serine/Threonine by immunoblotting, and the major phosphorylation sites was S187, S205, T206, S208 and S317 as revealed by LC-MS/MS. VP35, which contains both dsRNA-binding and oligomerization domains, is an essential polymerase cofactor and plays immune antagonist roles in host cells by targeting RIG-I-like receptors, PKR, and dsRNA. Previous work indicates VP35 binds synthetic dsRNA molecules in vitro and can inhibit IFN induction mediated by these dsRNAs in cell culture. Several studies clearly demonstrate the correlation between VP35 dsRNA-binding activity and its ability to inhibit type I IFN responses. In addition to acting as an immune antagonist, VP35 also has diverse functions during virus replication. Since virulence is correlated to the ability of the virus to suppress the innate immune response and VP35 is one of the major viral players in suppressing the host innate immune response.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.