

Recombinant ASFV PP62 Protein, His-tagged

Cat. No. pp62-01A **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant African Swine Fever virus (ASFV) pp62 polyprotein (NCBI accession number NP_042787.1, AA1-530), expressed in HEK293 cells and purified from cell pellets by immobilised metalaffinity and ion exchange chromatography. The protein contains a C-terminal glycine-serine linker and a His-tag. This polyprotein is the precursor for structural proteins p15 and p35 which are essential components of the viral shell.
Species	ASFV
Source	HEK293
ProteinLength	1-530 a.a.
Description	African swine fever (ASF) is a highly contagious haemorrhagic viral disease affecting domestic and wild pigs. It is caused by an enveloped deoxyvirus of the Asfarviridae family that infects domestic and wild pigs as well as soft-bodied ticks of the Ornithodoros genus. Outbreaks have been reported in Africa and parts of Europe, South America, and the Caribbean. More recently (since 2007) the disease has been reported in multiple countries across Africa, Asia and Europe, in both domestic and wild pigs (OIE, 2018). There is currently no approved vaccine for ASFV infection. African swine fever virus (ASFV) has a double-stranded DNA genome of 170-190 kbp, that encodes more than 150 polypeptides, including pp220, p72, p54, p30, and CD2v. To date, 110 ORFs have been identified and two of those encode the ASFV polyprotein precursors pp220 and pp62 (or pp60). Pp62 has a relative molecular

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weight of 60.5 kDa and is encoded by the gene CP530R. It can be proteolytically cleaved into the mature virion proteins p35 and p15 by S273R (Alonso et al., 2001). Pp220, pp62, and their mature proteins have important functions in the assembly of virions and viral infection (Jia et al., 2017). Extracellular mature virus particles are composed of a viral core consisting of a central DNA-containing nucleoid, a surrounding core shell, an ER-derived inner lipid envelope, an icosahedral protein capsid, and a plasma membrane derived envelope. Particles are assembled within cytoplasmic viral factories from endoplasmic reticulum-derived viral membranes which become icosahedral particles by the gradual formation of the outer capsid layer. Immunoelectron microscopy showed that pp62 cleavage products reside within the core shell (Suárez et al., 2010). This shell is formed underneath the viral envelope, and subsequently the viral DNA and nucleoproteins are packaged and condensed to form the electron-dense nucleoid. Intracellular mature virions made at the assembly sites are infectious and a fraction of them are transported to the plasma membrane, where they bud, and become infectious extracellular enveloped virions. Processing of polyproteins pp220 and pp62 requires the expression of the major capsid protein p72 and proper processing is an important sign of mature virions. Incomplete processing of pp220 and pp62 results in virus particles without a core or lacking infectiveness (Andrés et al., 2002).

Storage	Short Term Storage: -80 centigrade Long Term Storage: -80 centigrade Freezing: Avoid multiple freeze/thaw cycles.
Concentration	0.57 mg/mL
Storage Buffer	50mM Tris-HCl pH8.0, 200mM NaCl, sterile filtered.
Shipping	Dry ice

GENE INFORMATION

Gene Name	CP530R 60 kDa polyprotein [African swine fever virus]
Official Symbol	CP530R 60 kDa polyprotein [African swine fever virus]
Synonyms	CP530R; 60 kDa polyprotein; precursor of structural proteins p35 and p15
Gene ID	22220323
Protein Refseq	NP_042787
UniProt ID	Q65179
SDS-PAGE	Coomassie-stained SDS-PAGE showing purified African Swine Fever virus pp62 polyprotein.

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