

Canine distemper virus (strain Onderstepoort) Fusion glycoprotein F0 (His & SUMO)

General Information

Synonyms: F;Fusion glycoprotein F0

Protein Construction: 136-608 aa

Species: CDV

Expression Host: E. coli

Accession: P12569

Molecular Weight: 67.5 kDa (predicted)

AA Sequence:

QIHWDNLSTIGIIGTDNVHYKIMTRPSHQYLVIKLIPNASLIENCTKAELGEYEKLLNSVLEPINQALTLMTKNVK
PLQSLGSGRRQRFFAGVVLGVALGVATAAQITAGIALHQSNLNAQAIQSLRSTSLEQSNKAIEEIREATQETVI
AVQGVQDYVNNELVPAMQHMSELVQRLGLRLLRYYTELLSIFGPSLRDPISAEISIQALIYALGGEIHKILEKL
GYSGSDMIAILESRIKTKITHVDLPGKFILSISYPTLSEVKGVIVHRLEAVSYNIGSQEWYTTVPRIATNGYLIS
NFDESSCVFVSESAICSQNSLYPMSPLLQQCIRGDTSSCARTLVSGTMGNKFIKSKGNIVANCASILCKCYSTSTI
INQSPDKLLTFIASDTCPLVEIDGATIQVGGRRQYPDMVYEGKVALGPAISLDRLDVGTLGNALKKLDLDAKVLI
DSSNQILETVRRSSFNFGS

QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 90% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Class I viral fusion protein. Under the current model, the protein has at least 3 conformational states: pre-fusion native state, pre-hairpin intermediate state, and post-fusion hairpin state. During viral and plasma cell membrane fusion, the heptad repeat (HR) regions assume a trimer-of-hairpins structure, positioning the fusion peptide in close proximity to the C-terminal region of the ectodomain. The formation of this structure appears to drive apposition and subsequent fusion of viral and plasma cell membranes. Directs fusion of viral and cellular membranes leading to delivery of the nucleocapsid into the cytoplasm. This fusion is pH independent and occurs directly at the outer cell membrane. The trimer of F1-F2 (F protein) probably interacts with H at the virion surface. Upon HN binding to its cellular receptor, the hydrophobic fusion peptide is unmasked and interacts with the cellular membrane, inducing the fusion between cell and virion membranes. Later in infection, F proteins expressed at the plasma membrane of infected cells could mediate fusion with adjacent cells to form syncytia, a cytopathic effect that could lead to tissue necrosis.

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