CREATIVE BIOMART®
Diagnostic Proteins

Recombinant Puumala Virus Glycoprotein 2 (Gc), hFc-tagged

Product Information

Cat#
PUU-544
Product Name
Recombinant Puumala Virus Glycoprotein 2 (Gc), hFc-tagged
Description
Puumala Virus Glycoprotein 2 (Gc), has been manufactured in HEK cells in response to the unmet need for highly purified, concentrated protein for use in serological based diagnostic assays. Recombinant glycoprotein G2 (amino acids 646-1116) was C-terminally tagged using a 15 amino acid glycine-serine linker and a human IgG1 Fc-tag.
Type
Recombinant
Gene
Glycoprotein 2 (Gc)
Species
Puumala Virus
Source
HEK293
Synonyms
Puumala Virus Glycoprotein 2 (Gc)
Formulation
DPBS pH 7.4, sterile filtered, contains traces of CHAPS
Concentration
0.18 mg/mL

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Purity

Greater than 90% purity by SDS-PAGE.

Storage

Short Term Storage: +2 centigrade to +8 centigrade
Long Term Storage: -80 centigrade

Notes

This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Tags

C-terminal human IgG1 Fc

Freezing

Can be frozen, but avoid multiple freeze/thaw cycles.

Sequence Strain

Umea/hu

Background

Puumala virus (PUUV) is an enveloped, single-stranded negative-sense RNA virus. PUUV is a Hantavirus that belongs to the Hantavirus genus, within the family Bunyaviridae. Hantaviruses are zoonotic pathogens that have global distribution. Rodents and small mammals act as natural reservoirs for Hantaviruses, with each Hantavirus strain being transmitted by a different rodent host species or related species.
The hantavirus virion comprises three genome segments S, M and L, that encode the nucleocapsid (N) protein, glycoprotein precursor (GPC) and RNA-dependent RNA-polymerase, respectively (Schmaljohn, 2007). GPC is a polyprotein of 1133–1158 amino acid (aa) residues in length (Spiropoulou, 2011). Cotranslational cleavage of GPC (a 1133–1158 amino acid polyprotein) at a site C-terminal to a conserved 'WAASA' sequence by the cellular signal peptidase complex produces glycoproteins G1/Gn and G2/Gc, respectively (Löber, et

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al., 2001). These glycoproteins are responsible for virus attachment and entry into the host cells and are considered to be a major determinant of virus pathogenicity (Spiropoulou, 2011). The G1 and G2 cytoplasmic tails interact with virus encoded ribonucleoprotein (RNP) complexes and are involved in virion assembly (Schmaljohn, et al., 1985; Hepojoki, et al., 2012). They form a spike complex, which is located on the outer surface of the virion with each spike containing four molecules of both glycoproteins. Virus-membrane fusion activity has been associated with G2 through the identification of a fusion peptide which appears to be conserved across the Bunyaviridae (Battisti, et al., 2011). Chimeric VLPs have been described for the generation of virus-reactive mAbs against hantavirus G2 glycoprotein (Zvirbliene, et al., 2014) which will be a useful tool for the development of diagnostic assays.

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