

# Human cytomegalovirus (strain Merlin) (HHV-5) Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag (MALS verified)

Catalog # ENN-V5283



BIOSYSTEMS  
**Acro**

## Source

Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag(ENN-V5283) is expressed from human 293 cells (HEK293). It contains AA Ala 31 - Arg 278 & Arg 24 - Leu 719 (H&L) & Glu 28 - Gln 171 (UL128) & Ser 26 - Val 214 (UL130) & Gln 19 - Asn 129 (UL131) (Accession # [Q6SW67](#) & [F5HCH8](#) (H&L) & [V9LLX6](#) (UL128) & [F5HCP3](#) (UL130) & F5HET4 (UL131)).

Predicted N-terminus: Trp (H&L) & Glu 28 (UL128) & Ser 26 (UL130) & Gln 19 (UL131)

## Molecular Characterization

The protein has a calculated MW of 110.8 kDa (H&L) & 16.7 kDa (UL128) & 23.7 kDa (UL130) & 13.0 kDa (UL131). The protein migrates as 15 kDa, 35 kDa and 130 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>90% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

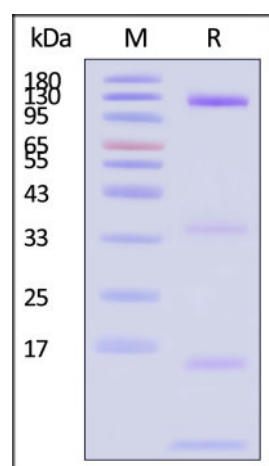
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

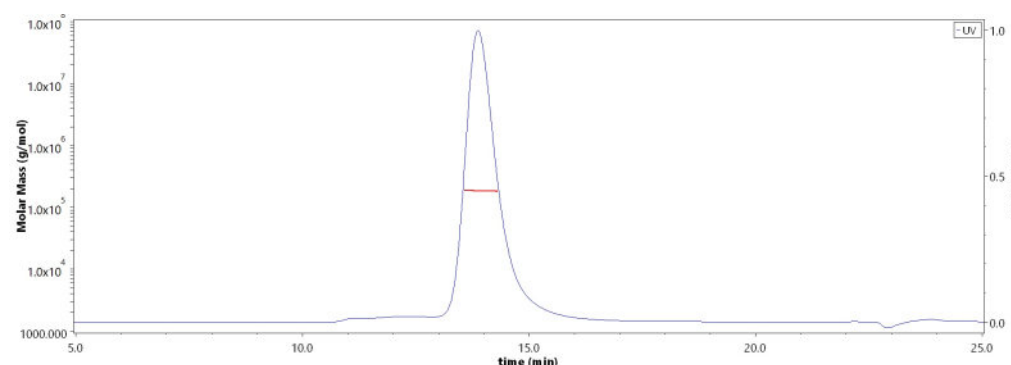
## SDS-PAGE



Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-ELISA

## SEC-MALS



The purity of Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag (Cat. No. ENN-V5283) is more than 85% and the molecular weight of this protein is around 170-200 kDa verified by SEC-MALS.

[Report](#)

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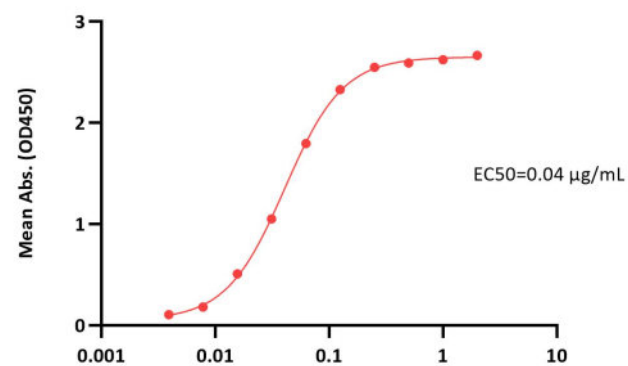
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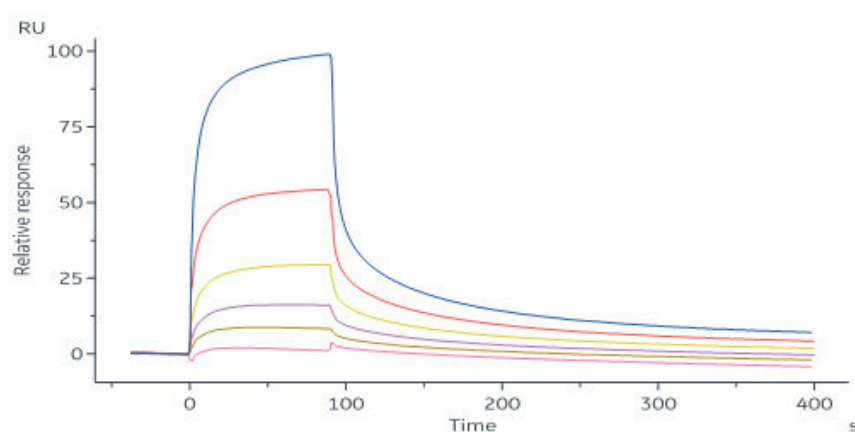
Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag ELISA  
0.5 µg of Human Neuropilin-2, His Tag per well



Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag Conc. (µg/mL)

Immobilized Human Neuropilin-2, His Tag (Cat. No. NR2-H52H3) at 5 µg/mL (100 µL/well) can bind Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag (Cat. No. ENN-V5283) with a linear range of 0.004-0.125 µg/mL (QC tested).

## Bioactivity-SPR



Human Neuropilin-2, His Tag (Cat. No. NR2-H52H3) immobilized on CM5 Chip can bind Human cytomegalovirus Envelope protein H&L&UL128&UL130&UL131, Twin-Strep Tag&His Tag (Cat. No. ENN-V5283) with an affinity constant of 3.41 µM as determined in a SPR assay (Biacore 8K) (Routinely tested).

## Background

Human cytomegalovirus (HCMV), a prototypical beta-herpes virus, is a major cause of morbidity and mortality in immunocompromised transplant recipients and congenitally infected fetuses. Different HCMV glycoprotein complexes are capable of mediating entry through interaction with cell-specific receptors on a panel of host cells. The pentamer (gH/gL/UL128/UL130/UL131A) mediates HCMV entry into epithelial, endothelial, and myeloid cells by its binding to neuropilin 2 (Nrp2). The trimer (gH/gL/gO) can mediate infection of all cell types by binding to platelet-derived growth factor-alpha (PDGFR $\alpha$ ). Both pentamer and trimer need to interact with the glycoprotein B (gB), the fusogenic protein, to trigger the virus and host cell membrane fusion.

## Clinical and Translational Updates

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