

### Synonym

Glycoprotein B,gB,Envelope glycoprotein B

### Source

HCMV Glycoprotein B (gB) Protein (Strain AD169), His Tag is the ectodomain of HCMV (strain AD169) glycoprotein B (gB) which contains AA Ser 25 - Phe 706 (Accession # [P06473](#) (Y155G, I156H, Y157R, Y206H, W240A, L241T, Y242H, R456S, R459S)). The recombinant protein is expressed from human 293 cells (HEK293) with a polyhistidine tag at the C-terminus. Mutations Y155G, I156H, Y157R, Y206H, W240A, L241T, Y242H and R456S, R459S are introduced to stabilize the trimeric postfusion state of HCMV gB protein and abolish the furin cleavage site, respectively.

Predicted N-terminus: Ser 25

### Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 79.6 kDa. The protein migrates as 90-120 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 1.0 EU per µg by the LAL method.

### Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

### 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

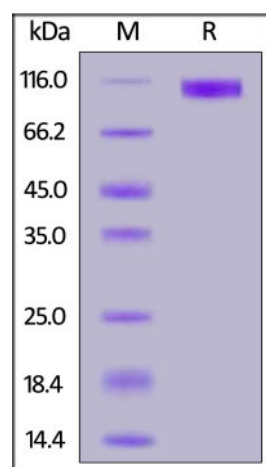
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

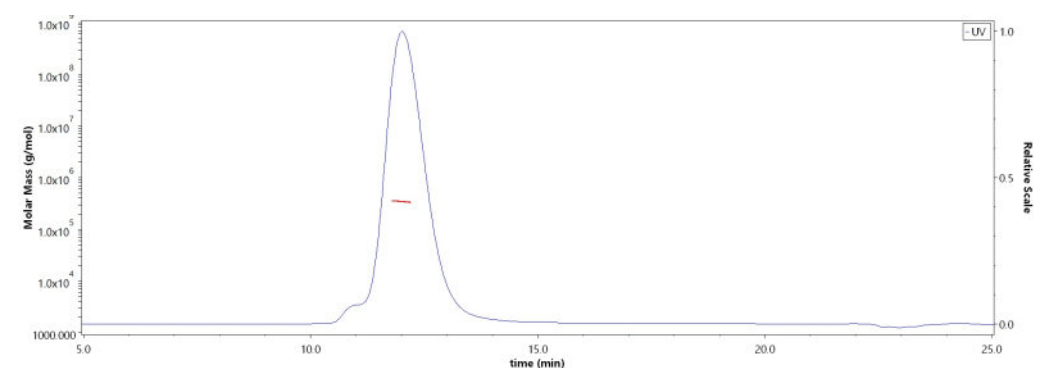
### SDS-PAGE



HCMV (strain AD169) Glycoprotein B (gB), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

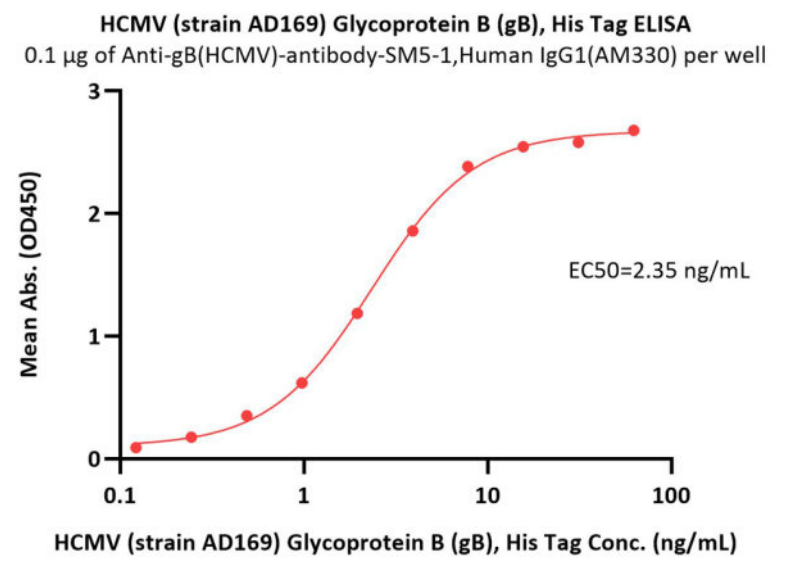
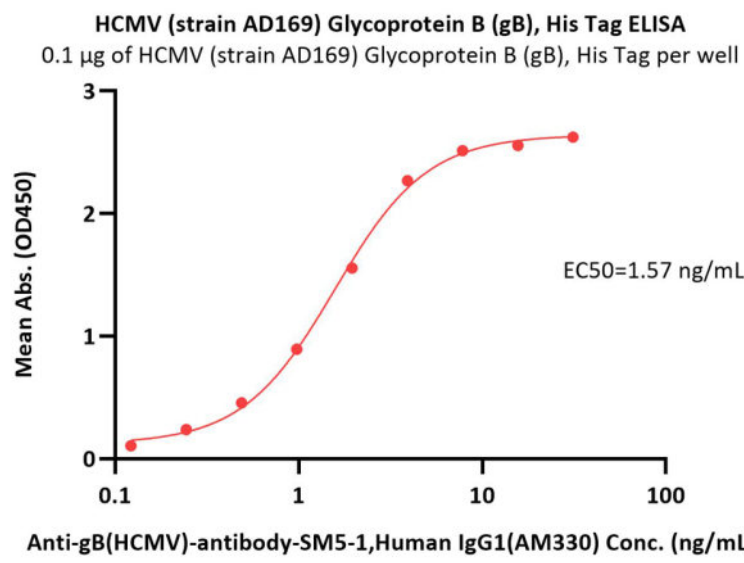
### Bioactivity-ELISA

### SEC-MALS



The purity of HCMV (strain AD169) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H4) is more than 95% and the molecular weight of this protein is around 308-376 kDa verified by SEC-MALS.

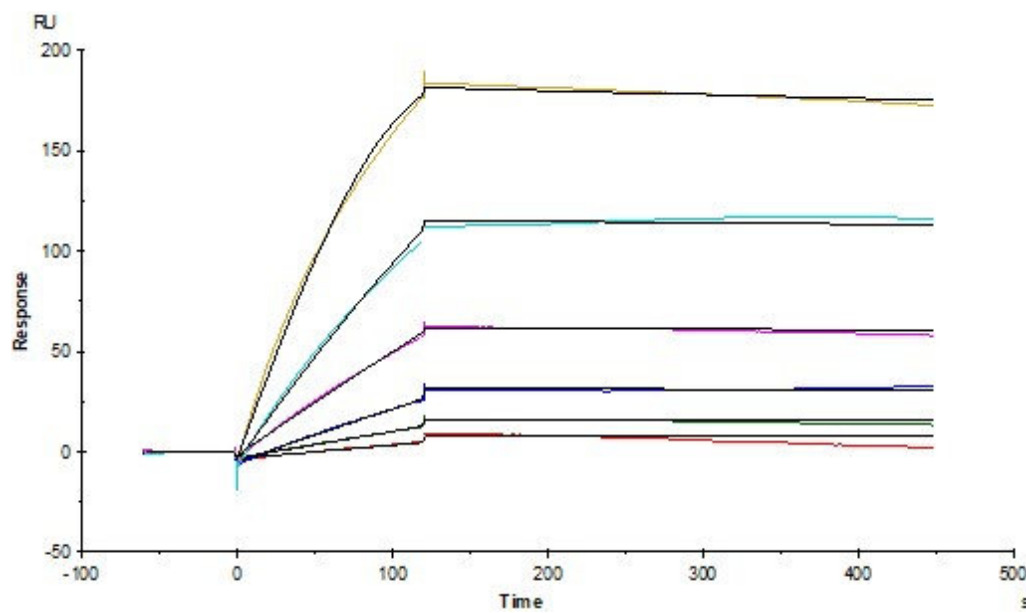
[Report](#)



Immobilized HCMV (strain AD169) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H4) at 1 µg/mL (100 µL/well) can bind Anti-gB(HCMV)-antibody-SM5-1, Human IgG1(AM330) with a linear range of 0.1-4 ng/mL (QC tested).

Immobilized Anti-gB(HCMV)-antibody-SM5-1, Human IgG1(AM330) at 1 µg/mL (100 µL/well) can bind HCMV (strain AD169) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H4) with a linear range of 0.1-8 ng/mL (Routinely tested).

### Bioactivity-SPR



Anti-glycoprotein B antibody-SM5-1 captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind HCMV (strain AD169) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H4) with an affinity constant of 5.59 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

### Background

Human cytomegalovirus is a species of the Cytomegalovirus genus of viruses, which in turn is a member of the viral family known as Herpesviridae or herpesviruses. It is typically abbreviated as HCMV or, commonly but more ambiguously, as CMV. CMV Virus Envelope Glycoprotein B (CMV-GB) can be cleaved into glycoprotein GP55. Envelope glycoprotein that plays a role in host cell entry, cell to-cell virus transmission, and fusion of infected cells. CMV-GB may be involved in the initial attachment via binding to heparan sulfate together with the gM/gN complex that binds heparin with higher affinity. Furthermore, CMV-GB can interact with host integrin ITGB1, PDGFRA and EGFR that likely serve as postattachment entry receptors. Also, CMV-GB participates in the fusion of viral and cellular membranes leading to virus entry into the host cell. Membrane fusion is mediated by the fusion machinery composed at least of gB and the heterodimer gH/gL.

### Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.