

**Synonym**

Glycoprotein B/gB (HCMV)

**Source**

HCMV (strain Merlin) Glycoprotein B (gB), His Tag(CMB-V52H5) is expressed from human 293 cells (HEK293). It contains AA Ser 25 - Glu 698 (Accession # [F5HB53-1](#) (I156H, H157R, W240N, Y242T, C246S, R457S, R460S)).

Predicted N-terminus: Ser 25

**Molecular Characterization**

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 78.7 kDa. The protein migrates as 110-140 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

The protein is designed as a trimer.

**Endotoxin**Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.**Purity**

&gt;95% as determined by SDS-PAGE.

&gt;95% as determined by SEC-MALS.

**Formulation**Lyophilized from 0.22  $\mu$ m filtered solution in PBS, 0.2 M Arginine, 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.*

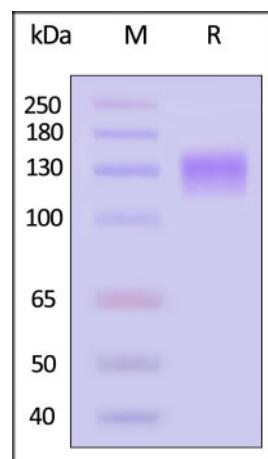
**Storage**

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

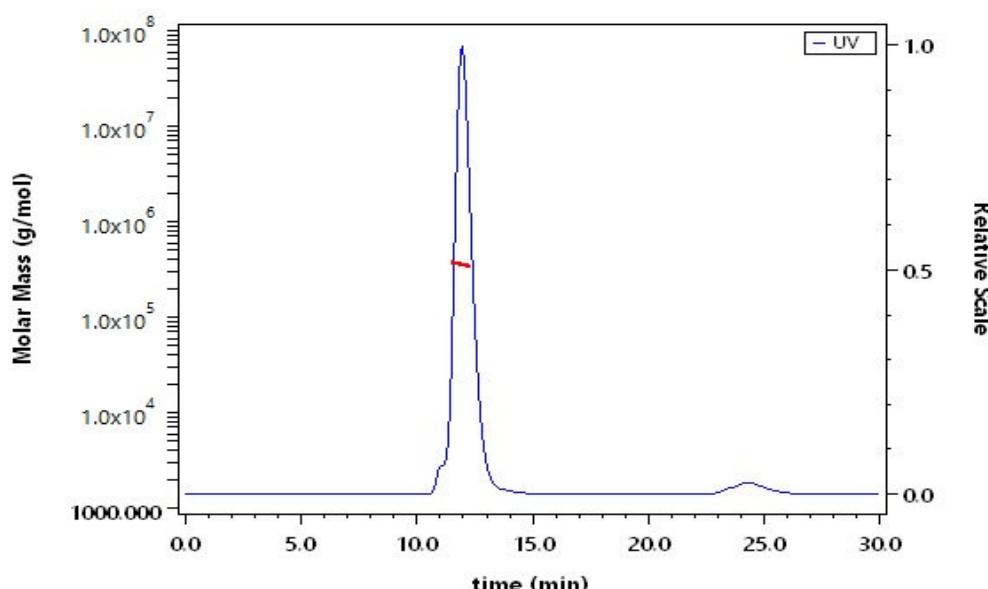
*Please avoid repeated freeze-thaw cycles.*

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.

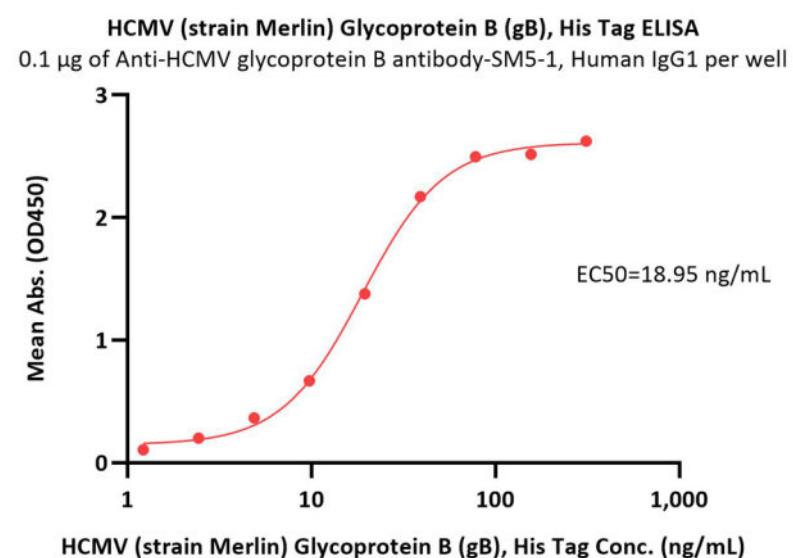
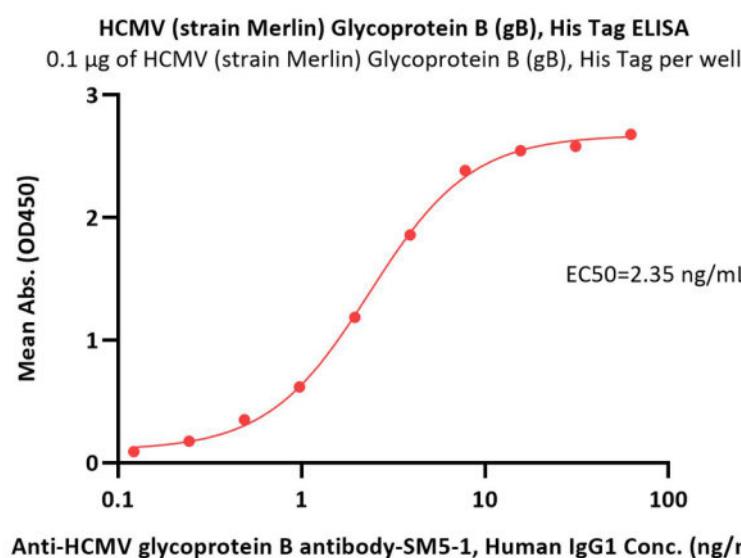
**SDS-PAGE**

HCMV (strain Merlin) Glycoprotein B (gB), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

**SEC-MALS**

The purity of HCMV (strain Merlin) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H5) is more than 95% and the molecular weight of this protein is around 315-386 kDa verified by SEC-MALS.

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Immobilized HCMV (strain Merlin) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H5) at 1 µg/mL (100 µL/well) can bind Anti-HCMV glycoprotein B antibody-SM5-1, Human IgG1 with a linear range of 0.2-8 ng/mL (QC tested).

Immobilized Anti-HCMV glycoprotein B antibody-SM5-1, Human IgG1 at 1 µg/mL (100 µL/well) can bind HCMV (strain Merlin) Glycoprotein B (gB), His Tag (Cat. No. CMB-V52H5) with a linear range of 1-39 ng/mL (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.

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