# Human Fc gamma RIIB / CD32b Protein, His Tag (SPR & BLI verified)

Catalog # AMS.CDB-H5228

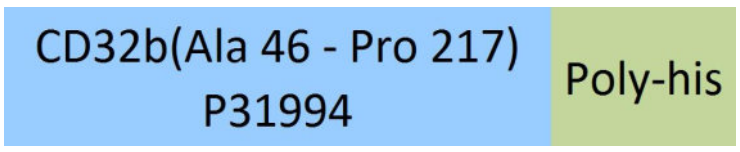
## Synonym

FCGR2B,CD32b,CD32,FCG2,IGFR2,CDw32

## Source

Human CD32b, His Tag (SPR & BLI verified) (CDB-H5228) is expressed from human 293 cells (HEK293). It contains AA Ala 46 - Pro 217 (Accession # P31994).
Predicted N-terminus: Ala 46

## Molecular Characterization




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

The protein has a calculated MW of 20.4 kDa. The protein migrates as 25-33 kDa under reducing (R) condition (SDS-PAGE) due to different glycosylation.

## Endotoxin

Less than 1.0 EU per μg by the LAL method.

## Purity

>95% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

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

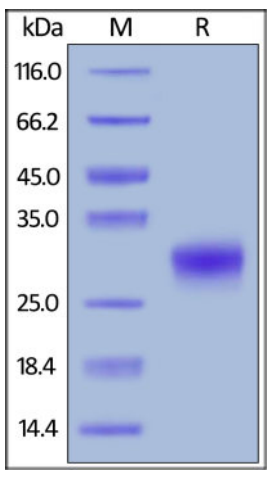
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

***Please avoid repeated freeze-thaw cycles.***

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE




Human CD32b, His Tag (SPR & BLI verified) 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-SPR

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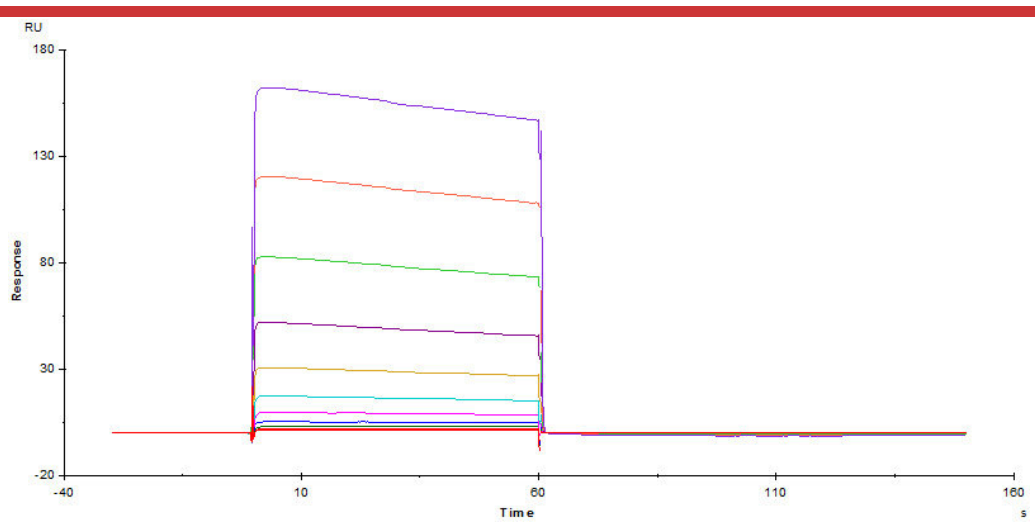
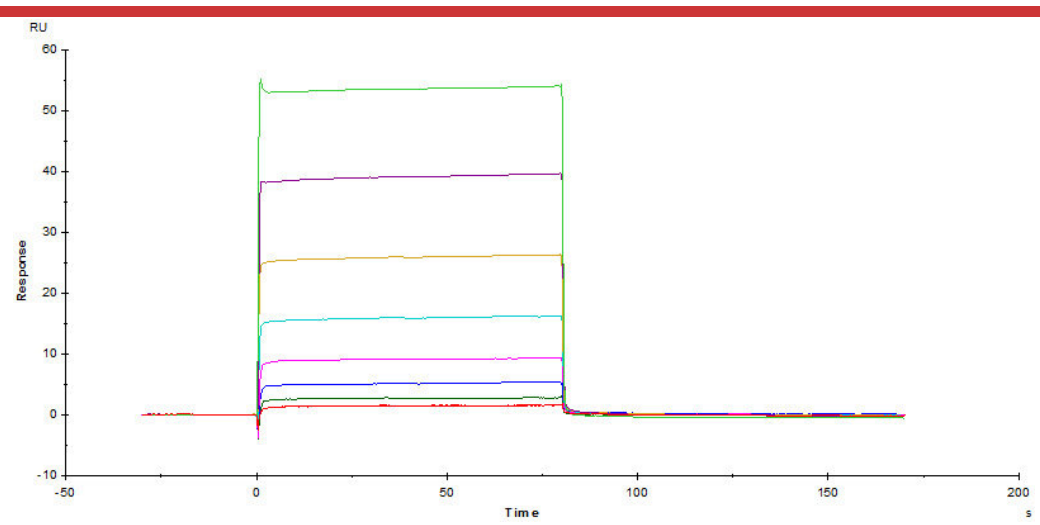
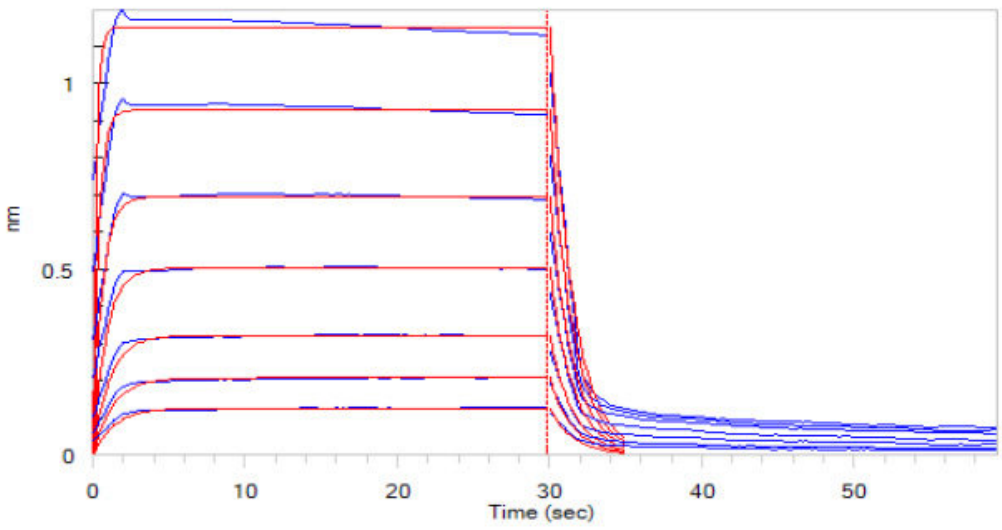



Immobilized Human CD32b, His Tag (SPR & BLI verified) (Cat. No. CDB-H5228) on CM5 Chip via anti-His antibody, can bind Rituximab with an affinity constant of 10.1 μM as determined in a SPR assay (Biacore T200) (QC tested).




Immobilized Rituximab on CM5 Chip, can bind Human CD32b, His Tag (SPR & BLI verified) (Cat. No. CDB-H5228) with an affinity constant of 5.5 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

## Bioactivity-BLI




Loaded Human CD32b, His Tag (SPR & BLI verified) (Cat. No. CDB-H5228) on HIS1K Biosensor, can bind Rituximab with an affinity constant of 4.30 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

## Background

Receptors for the Fc region of IgG (Fc γ R) are members of the Ig superfamily that function in the activation or inhibition of immune responses. Three classes of human Fc γ Rs: RI (CD64), RII (CD32), and RIII (CD16), which generate multiple isoforms, are recognized. There are three genes for human Fcγ RII /CD32 (A, B, and C) and one for mouse Fcγ RII B (CD32B). CD32 is a low affinity receptor for IgG. Low affinity immunoglobulin gamma Fc region receptor II-b (FCGR2B) is also known as CD32b, FCG2, IGFR2. CD32B is expressed on B cells and myeloid dendritic cells. Ligation of CD32B on B cells downregulates antibody production and may, in some circumstances, promote apoptosis. Co-ligation of CD32B on dendritic cells inhibits maturation and blocks cell activation. CD32B may also be a target for monoclonal antibody therapy for malignancies.

## References


(1) Hamada F., et al., 1993, Proc. Natl. Acad. Sci. U.S.A. 90:6305-6309.

(2) Sarmay G., et al., 1997, Immunol. Lett. 57:159-164.

(3) Laine D., et al., 2005, J. Gen. Virol. 86:1771-1784.