

Synonym

CD32a,FCGR2A,CD32,FCG2 ,FCGR2A1,IGFR2

Source

Biotinylated Human CD32a (H167), Avitag,His Tag (SPR & BLI verified) (CDA-H82E6) is expressed from human 293 cells (HEK293). It contains AA Ala 36 - Ile 218 (Accession # P12318-1).

Predicted N-terminus: Ala 36

Molecular Characterization

This protein carries an Avi tag (Avitag™) at the C-terminus, followed by a polyhistidine tag.

The protein has a calculated MW of 24.0 kDa. The protein migrates as 30-38 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Biotinylation

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotin:Protein Ratio

The biotin to protein ratio is 0.5-1 as determined by the HABA assay.

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. 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.

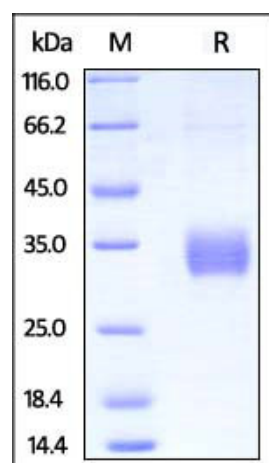
Storage

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

Please avoid repeated freeze-thaw cycles.

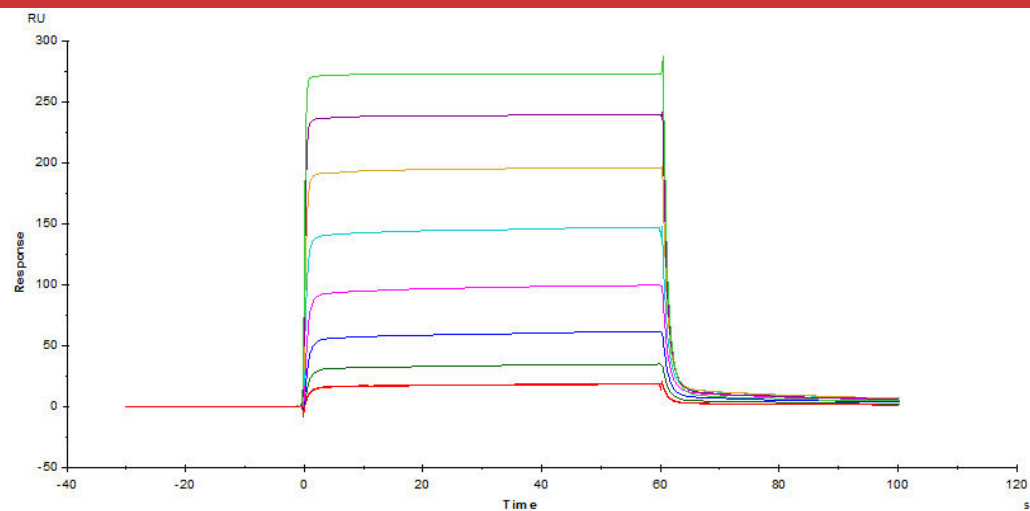
No activity loss was observed after storage at:

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

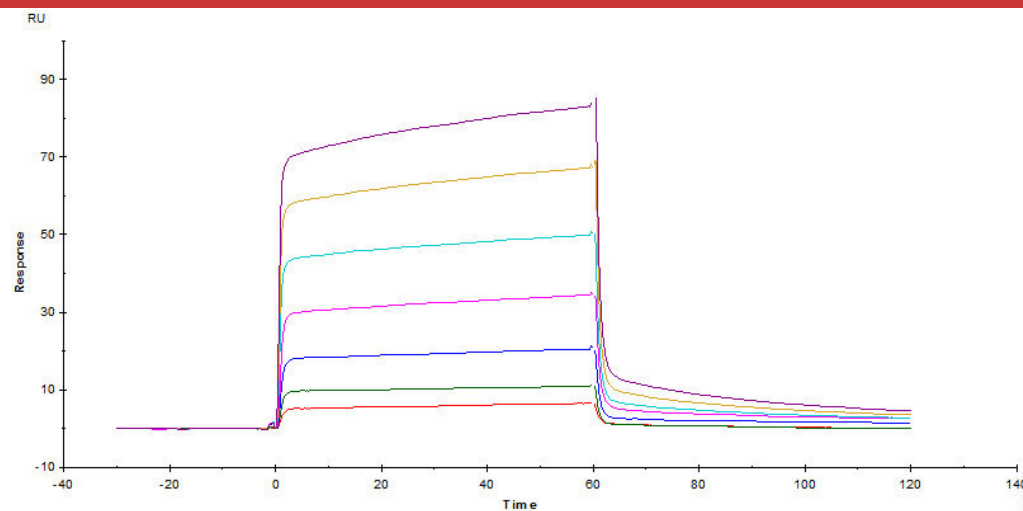
SDS-PAGE

Biotinylated Human CD32a (H167), Avitag,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 90%.

Bioactivity-SPR

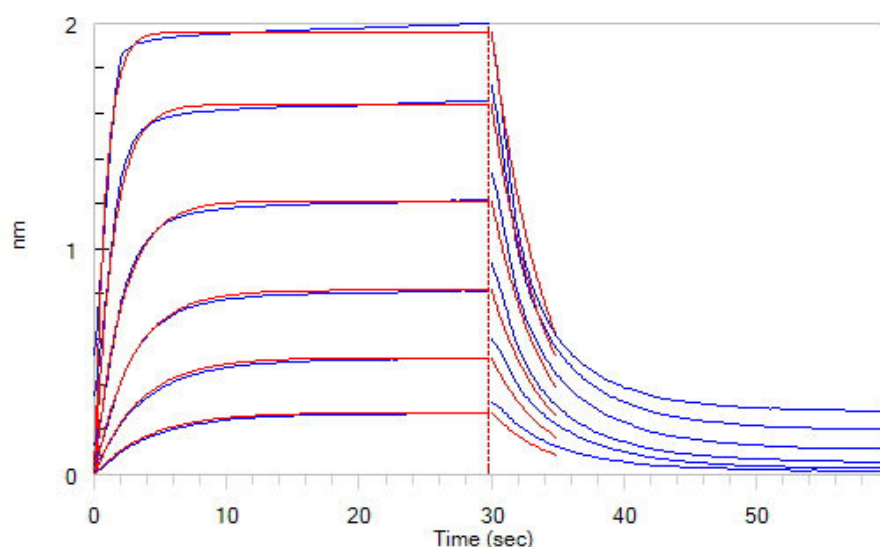


Biotinylated Human CD32a (H167), Avitag, His Tag (SPR & BLI verified) (Cat. No. CDA-H82E6) captured on Biotin CAP- Series S Sensor Chip can bind Rituximab with an affinity constant of 0.66 μM as determined in a SPR assay (Biacore T200) (QC tested).



Immobilized Biotinylated Human CD32a (H167), Avitag, His Tag (SPR & BLI verified) (Cat. No. CDA-H82E6) on SA Chip can bind Rituximab with an affinity constant of 0.74 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human CD32a (H167), Avitag, His Tag (SPR & BLI verified) (Cat. No. CDA-H82E6) on SA Biosensor, can bind Rituximab with an affinity constant of 0.59 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 Fc γ RII /CD32 (A, B, and C) and one for mouse Fc γ RII B (CD32B). CD32 is a low affinity receptor for IgG. The activating isoform, CD32A, is expressed on monocytes, neutrophils, platelets and dendritic cells. CD32A is expressed on many immune cell types (macrophage, neutrophil, eosinophils, platelets, dendritic cells and Langerhan cells), where inhibitory ITIMbearing receptors may also be coexpressed and coengaged by specific ligands. CD32A delivers an activating signal upon ligand binding, and results in the initiation of inflammatory responses including cytolysis, phagocytosis, degranulation and cytokine production. The responses can be modulated by signals from the coexpressed inhibitory receptors such as CD32B, and the strength of the signal is dependent on the ratio of expression of the activating and inhibitory receptors.

References

- (1) [Ravetch JV. et al., 2001, Annu Rev Immunol. 19: 275-83.](#)
- (2) [Takai T. 2002, Nature Rev Immunol. 2: 580-92.](#)
- (3) [Nagarajan S. et al., 2000, Blood. 3: 1069-77.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.