

## Recombinant Human CD32a/FCGR2A Protein (167 His, His Tag)

Catalog Number: PKSH030294

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

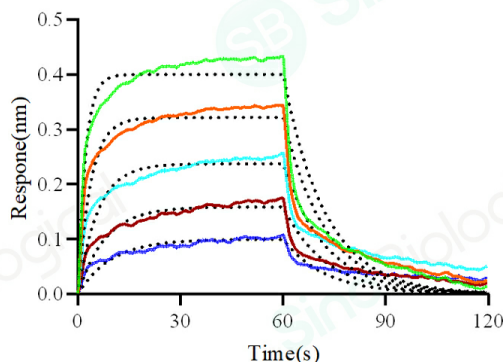
### Description

|                      |   |
|----------------------|---|
| <b>Species</b>       | Human   |
| <b>Source</b>        | HEK293 Cells-derived Human CD32a/FCGR2A protein Met 1-Ile 218, with an C-terminal His |
| <b>Calculated MW</b> | 22 kDa  |
| <b>Observed MW</b>   | 30 kDa  |
| <b>Accession</b>     | P12318-1  |
| <b>Bio-activity</b>  | Measured by its ability to bind Human IgG2-Fc (Native) in a functional ELISA.         |

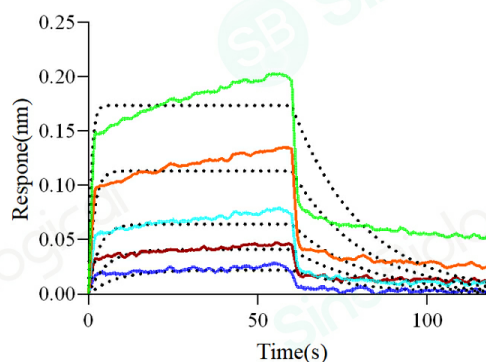
### Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 95 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| <b>Formulation</b>    | Lyophilized from sterile PBS, pH 7.5<br>Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual.             |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.  |

### Data



Loaded FcγRIIA / CD32a (H167) recombinant protein (Cat. PKSH030294) on His1K Biosensor, can bind Bevacizumab (IgG1) with an affinity constant of 0.55 µM as determined in a BLI assay (Sartorius Octet Red384).



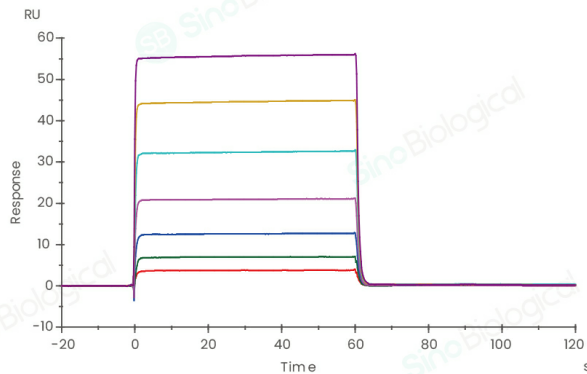
Loaded Rituximab (IgG1) on ProA Biosensor, can bind Human FcγRIIA / CD32a (H167) recombinant protein (Cat. PKSH030294) with an affinity constant of 1.7 µM as determined in a BLI assay (Sartorius Octet Red384).

### For Research Use Only

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Captured Bevacizumab (IgG1) on proA Chip can bind Human Fc $\gamma$ RIIA / CD32a (H167) recombinant protein (Cat: PKSH0302951) with an affinity constant of 0.58  $\mu$ M as determined in an SPR assay (Biacore T200) .

## Background

Receptors for the Fc region of IgG (Fc $\gamma$ R) are members of the Ig superfamily that function in the activation or inhibition of immune responses. Human Fc $\gamma$ Rs are divided into three classes designated Fc $\gamma$ RI (CD64), Fc $\gamma$ RII (CD32), and Fc $\gamma$ RIII (CD16), which generate multiple isoforms, are recognized. The activating- type receptor either has or associates non-covalently with an accessory subunit that has an immunoreceptor tyrosine-based activation motif (ITAM) in its cytoplasmic domain. Fc $\gamma$ RI binds IgG with high affinity and functions during early immune responses, whereas Fc $\gamma$ RII and RIII are low affinity receptors that recognize IgG as aggregates surrounding multivalent antigens during late immune responses. Three genes for human Fc $\gamma$ RII (A, B, and C) and one for mouse (Fc $\gamma$ RIIB), encoding type I transmembrane proteins with ITAM motifs (Fc $\gamma$ RII A and C) or ITIM motifs (Fc $\gamma$ RIIB) in their cytoplasmic domains, have been identified. Human CD32, also known as Low affinity immunoglobulin  $\gamma$  Fc region receptor II-a, Fc $\gamma$ RII A or FCGR2A Protein, is expressed on cells of both myeloid and lymphoid lineages as well as on cells of non-hematopoietic origin. Associated with an ITAM-bearing adapter subunit, FcR $\gamma$ , CD32a delivers an activating signal upon ligand binding, and results in the initiation of inflammatory responses including cytolysis, phagocytosis, degranulation, and cytokine production.

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