

Recombinant Human CD32a/FCGR2A Protein (167 His, His&AVI Tag), Biotinylated

Catalog Number: PKSH030290

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

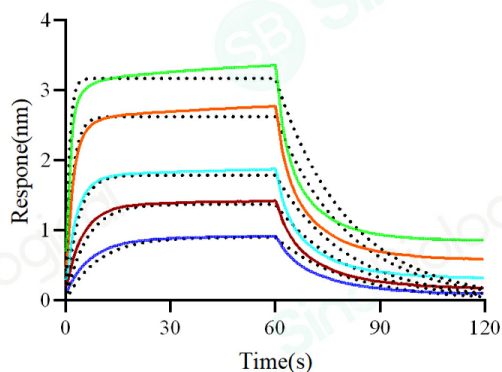
Description

Species	Human
Source	HEK293 Cells-derived Human CD32a/FCGR2A protein Met 1-Met 210, with an C-terminal His & Avi
Calculated MW	23.6 kDa
Observed MW	33 kDa
Accession	P12318-1
Bio-activity	1. Immobilized human IgG2 at 10 µg/ml (100 µl/well) can bind biotinylated human CD32 with a linear ranger of 0.16-0.8 µg/ml. 2. Using the Octet RED System, the affinity constant (Kd) of CD32a-AVI-His + BirA bound to human IgG was 12nM. 3. Labeling ratio of biotin to protein: 0.1-0.6.

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



Loaded Biotinylated Human Fc γ RIIA / CD32a (H167) recombinant protein (His &Avi Tag) (Cat. PKSH030290) on SA Biosensor, can bind Rituximab (IgG1) with an affinity constant of 0.53 µM as determined in a BLI assay (Sartorius Octet Red384).

Background

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Receptors for the Fc region of IgG (FcγR) are members of the Ig superfamily that function in the activation or inhibition of immune responses. Human FcγRs are divided into three classes designated FcγRI (CD64), FcγRII (CD32), and FcγRIII (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. FcγRI binds IgG with high affinity and functions during early immune responses, whereas FcγRII and RIII are low affinity receptors that recognize IgG as aggregates surrounding multivalent antigens during late immune responses. Three genes for human FcγRII (A, B, and C) and one for mouse (FcγRIIB), encoding type I transmembrane proteins with ITAM motifs (FcγRII A and C) or ITIM motifs (FcγRIIB) in their cytoplasmic domains, have been identified. Human CD32, also known as Low affinity immunoglobulin γ Fc region receptor II-a, FcγRII 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, FcRγ, 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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