



# Recombinant Protein Technical Manual

## Recombinant Human CD32a/FCGR2A Protein (167 His, His&AVI Tag), Biotinylated(Active) RPES0287

### Product Data:

**Product SKU:** RPES0287

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** P12318

### Protein Information:

**Molecular Mass:** 23.6 kDa

**AP Molecular Mass:** 33 kDa

**Tag:** C-His & AVI

**Bio-activity:** 1. Measured by its binding ability in a functional ELISA. 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.

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** 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

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** Low affinity immunoglobulin gamma Fc region receptor II-a; IgG Fc receptor II-a; CDw32; Fc-gamma RII-a; Fc-gamma-RIIa; FcRII-a; CD32; FCGR2A; FCG2; FCGR2A1;IGFR2;CD32A;CDw32;Fc gamma RIIA;FCG2;FcGR;FCGR2

## Immunogen Information:

**Sequence:** Met 1-Met 210

## Background:

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 (IgG Fc 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 (FcγRII A) 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 co-expressed inhibitory receptors such as Fcγ RII B, and the strength of the signal is dependent on the ratio of expression of the activating and inhibitory receptors.