Data Sheet (Cat.No.TMPJ-00446)

TargetMol

CD32A Protein, Human, Recombinant (R167, His)

General Information

Synonyms:	FcRII-a;IGFR2;Low Affinity Immunoglobulin Gamma Fc Region Receptor II-a;Fc-Gamma RII-a;FCGR2A1;Fc-γ RII-a;FCGR2A;CDw32;FCG2;Fc-Gamma-RIIa;CD32;Low Affinity Immunoglobulin γ Fc Region Receptor II-a;IgG Fc receptor II-a;Fc-γ-RIIa
Protein Construction:	Ala36-Ile218. It is identical to FCGR2A131H/R in the reference.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAA35827
Molecular Weight:	25-32 KDa (reducing condition)
AA Sequence:	Ala36-Ile218

QC Testing

Biological Activity:	Loaded Human CD32a-His on HIS1K Biosensor, can bind Anti-Human HER2 mAb with an affinity constant of 1.1 uM as determined in BLI assay. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM PB, 150 mM NaCl, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein 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.