

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

Catalog Number: 10374-H08H1



## General Information

### Gene Name Synonym:

RP11-5K23.6, CD32, CD32A, CDw32, FCG2, FCGR2, FCGR2A, FCGR2A1, FcGR, IGF2R, MGC23887, MGC30032

### Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Ile 218) of human CD32a (P12318-1) was expressed with a C-terminal polyhistidine tag.

**Source:** Human

**Expression Host:** Human Cells

## QC Testing

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

### Bio-Activity:

**Measured by its ability to bind Human IgG2-Fc (Native) (Cat:13504-HNAH) in a functional ELISA.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Gln 34

### Molecular Mass:

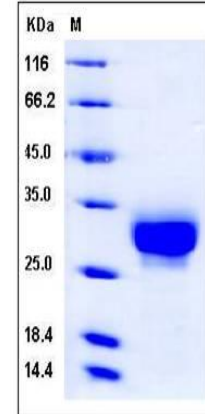
The recombinant human CD32a consists of 196 amino acids after removal of the signal peptide and predicts a molecular mass of 22 KDa. It migrates as an approximately 30 KDa protein due to glycosylation by SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.5

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## SDS-PAGE:



## Usage Guide

### Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## Protein Description

Receptors that recognize the Fc portion of IgG (Fcγ Rs) functions in the regulation of immune response and are divided into three classes designated Fcγ RI (CD64), Fcγ RII (CD32), and Fcγ RIII (CD16). Fcγ RI binds IgG with high affinity and functions during early immune responses, whereas Fcγ RII and RIII are low affinity receptors that recognize IgG as aggregates surrounding multivalent antigens during late immune responses. Human CD32 class is encoded by three closely related genes, and designated Fcγ RII A, B, and C which share 94 - 99% amino acid identity in their extracellular domains but differ substantially in their transmembrane and cytoplasmic domains. Fcγ RII A is expressed on cells of both myeloid and lymphoid lineages as well as on cells of non-hematopoietic origin. Associated with an ITAM (immunoreceptor tyrosine-based activation motif)- bearing adapter subunit, Fc Rγ, CD32a (Fcγ RII 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 coexpressed 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.

## References

1. Stuart, S.G. et al., 1989, EMBO. J. 8: 3657-3666.
2. Ravetch, J. et al., 2001, Annu. Rev. Immunol. 19: 275-283.
3. Takai, T., 2002, Nature Rev. Immunol. 2: 580-592.
4. Nagarajan, S. et al., 2000, Blood. 3: 1069-1077.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>