

## CD32 Antibody / CD32B / FCGR2B (R34966)

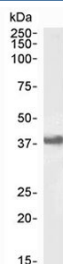
| Catalog No.  | Formulation                                                                   | Size   |
|--------------|-------------------------------------------------------------------------------|--------|
| R34966-100UG | 0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide | 100 ug |



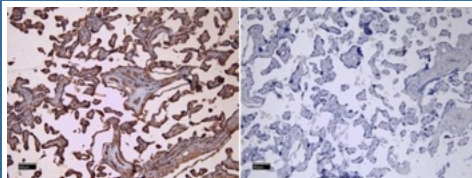
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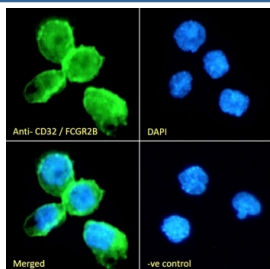
|                    |                                                                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Availability       | 1-3 business days                                                                                                                                            |
| Species Reactivity | Human                                                                                                                                                        |
| Format             | Antigen affinity purified                                                                                                                                    |
| Host               | Goat                                                                                                                                                         |
| Clonality          | Polyclonal (goat origin)                                                                                                                                     |
| Isotype            | Goat Ig                                                                                                                                                      |
| Purity             | Antigen affinity                                                                                                                                             |
| Gene ID            | 2213                                                                                                                                                         |
| RRID               | AB_2833066                                                                                                                                                   |
| Localization       | Cytoplasmic, membrane                                                                                                                                        |
| Applications       | Western Blot : 1-2ug/ml<br>Immunohistochemistry (FFPE) : 8ug/ml<br>Immunofluorescence : 10ug/ml<br>Flow Cytometry : 10ug/ml<br>ELISA (peptide) LOD : 1:16000 |
| Limitations        | This CD32 antibody is available for research use only.                                                                                                       |



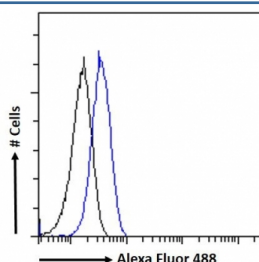
Western blot testing of human Daudi lysate with CD32 antibody at 1ug/ml. Predicted molecular weight: 34-40 kDa depending on the level of glycosylation.



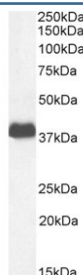
IHC testing of FFPE human placental tissue with CD32 antibody (left) at 8ug/ml and without primary Ab (right). Required HIER: steamed antigen retrieval with pH6 citrate buffer; HRP-staining.



IF/ICC staining of fixed and permeabilized human ThP-1 cells with CD32 antibody (green) at 10ug/ml and DAPI nuclear stain (blue).



FACS testing of fixed and permeabilized human K562 cells with CD32 antibody (blue) at 10ug/ml and naive goat Ig (black).



Western blot testing of human placental tissue lysate with CD32 antibody at 1ug/ml. Predicted molecular weight: 34-40 kDa depending on the level of glycosylation.

## Description

CD32 antibody detects the low affinity immunoglobulin gamma Fc region receptor IIb, also known as CD32B, a membrane receptor that regulates immune signaling and antibody feedback inhibition. The UniProt recommended name is Low affinity immunoglobulin gamma Fc region receptor II-b (FCGR2B). This protein belongs to the Fc gamma receptor family and is expressed on B cells, macrophages, dendritic cells, and mast cells, where it functions as an inhibitory receptor balancing immune activation and tolerance.

Functionally, CD32 antibody identifies an approximately 310-amino-acid transmembrane glycoprotein containing a cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM). When co-ligated with activating Fc gamma receptors or the B-cell receptor, CD32B transduces inhibitory signals that recruit phosphatases such as SHIP1 and SHP2. These enzymes suppress downstream kinases, calcium signaling, and cytokine release, preventing excessive immune activation. Through this negative feedback mechanism, CD32B maintains immune homeostasis and limits inflammation during antibody-mediated responses.

The FCGR2B gene is located on chromosome 1q23.3 and encodes one of the key members of the low-affinity Fc gamma receptor family, alongside FCGR2A and FCGR2C. Expression of CD32B is finely regulated by immune activation status and cellular context. On B lymphocytes, CD32B serves as a checkpoint receptor that suppresses antibody production and plasma cell differentiation when immune complexes engage both the B-cell receptor and Fc gamma receptor IIb. In monocytes, macrophages, and dendritic cells, CD32B reduces cytokine secretion and phagocytic activity, acting as a safeguard against autoimmune inflammation and tissue damage.

Pathologically, altered CD32B function or expression contributes to autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, and immune thrombocytopenia. Variants of FCGR2B that reduce receptor function are associated with enhanced antibody production and increased susceptibility to autoimmunity. In contrast, elevated expression of CD32B in certain cancers or chronic infections can suppress immune activation, limiting effective antibody responses. Additionally, CD32B has gained interest in oncology for its ability to modulate antibody-dependent cellular cytotoxicity, influencing the efficacy of therapeutic antibodies used in cancer treatment.

CD32 antibody is validated for use in relevant research applications to detect Fc gamma receptor IIb and investigate inhibitory signaling mechanisms in immune regulation. NSJ Bioreagents provides CD32 antibody reagents optimized for studies in immunology, autoimmunity, and therapeutic antibody development.

## Application Notes

Optimal dilution of the CD32 antibody should be determined by the researcher.

## Immunogen

Amino acids PDALEEPDDQNRI were used as the immunogen for this CD32 antibody.

## Storage

Aliquot and store the CD32 antibody at -20oC.