

CD16A (D8W2O) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	50-70	Rabbit IgG	#P08637	2214

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CD16 (D8W2O) Rabbit mAb recognizes endogenous levels of total CD16 protein. This antibody detects CD16A and does not cross-react with CD16B.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro160 of human CD16 protein.

Background

CD64 (FcγRI), CD32 (FcγRII), and CD16 (FcγRIII) are three classes of the immunoglobulin superfamily. CD64 has a high affinity for IgG with three Ig-like domains while CD32 and CD16 have low affinities with two Ig-like domains. Two genes encode CD16-A and CD16-B resulting only in a 6 amino acid difference in their ectodomains. However, CD16-A has a transmembrane anchor versus CD16-B, which has a glycosylphosphatidylinositol (1). CD64, CD32, and CD16 are membrane glycoproteins that are expressed by all immunologically active cells and trigger various immune functions (activate B cells, phagocytosis, antibody-dependent cellular cytotoxicity, immune complex clearance, and enhancement of antigen presentation) (2). CD16 cross-linking induces tyrosine phosphorylation (Tyr394) of Lck in NK cells (3). CD32 has tyrosine-based activation motifs in the cytoplasmic domain in contrast to CD16, which associates with molecules possessing these motifs (1). CD16A is expressed by NK cells, macrophages, and a subset of monocytes, while CD16B is expressed by neutrophils (4). CD16 is commonly used in combination with CD56 to characterize NK cells, with CD16 identifying NK cells capable of cytotoxicity (5).

Background References

1. Maenaka, K. et al. (2001) *J. Biol. Chem.* 276, 44898-44904.
2. Fridman, W. H. et al. (1992) *Immunol. Rev.* 125, 49-76.
3. Pignata, C. et al. (1993) *J. Immunol.* 151, 6794-6800.
4. Pincetic, A. et al. (2014) *Nat Immunol* 15, 707-16.
5. Nagler, A. et al. (1989) *J Immunol* 143, 3183-91.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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