

CD33 Antibody

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Applications: W, W-S, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 70-80	Source/Isotype: Rabbit	UniProt ID: #P20138	Entrez-Gene Id: 945
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Product Usage Information**Application**

Western Blotting
Simple Western™
Immunoprecipitation

Dilution

1:1000
1:10 - 1:50
1:100

Storage

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

Specificity/Sensitivity

CD33 Antibody recognizes endogenous levels of total CD33 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CD33 protein. Antibodies are purified by peptide affinity chromatography.

Background

CD33, a type I transmembrane protein, is a sialic acid-binding Ig-like lectin 3 (Siglec-3) of the Ig superfamily, and human CD33 binds preferentially to alpha-2, 6-linked sialic acid. Upon binding to its ligands, CD33 transduces inhibitory signaling through the immunoreceptor tyrosine-based inhibitory motif (ITIM) in its intracellular domain, inhibiting cellular functions such as phagocytosis. In addition, CD33 is also involved in other processes, such as adhesion (1-3). Due to its exclusive expression on hematopoietic cells, particularly the myeloid lineage and their progenitors, CD33 has been actively pursued as a therapeutic target against acute myeloid leukemia (AML) (4,5). CD33 may also be involved in Alzheimer's Disease (AD) (6-8).

Background References

1. Avril, T. et al. (2004) *J Immunol* 173, 6841-9.
2. Cao, H. and Crocker, P.R. (2011) *Immunology* 132, 18-26.
3. Crocker, P.R. et al. (2012) *Ann N Y Acad Sci* 1253, 102-11.
4. Laszlo, G.S. et al. (2014) *Blood Rev* 28, 143-53.
5. Laing, A.A. et al. (2017) *Exp Hematol* 54, 40-50.
6. Jiang, T. et al. (2014) *Mol Neurobiol* 49, 529-35.
7. Siddiqui, S.S. et al. (2017) *J Biol Chem* 292, 15312-20.
8. Zhao, L. (2018) *Gerontology*, 1-9.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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