Revision 4

Store at -20C

#12981

Mannose Receptor Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	190	Rabbit	#P22897	4360

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

Mannose Receptor Antibody recognizes endogenous levels of total mannose receptor protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu115 of human mannose receptor protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The mannose receptor (MR/CLEC13D/CD206/MMR/MRC1/Macrophage mannose receptor 1) is an endocytic receptor expressed by populations of dendritic cells, macrophages, and nonvascular endothelium (1). The mannose receptor is a heavily glycosylated type I transmembrane protein with three types of extracellular domains and a short carboxy-terminal cytoplasmic domain with no apparent signaling motif (2-4). The extracellular portion of the protein is made up of a CR domain, which binds sulfated glycans, an FNII domain, which binds collagens, and eight C-type lectin domains, which bind carbohydrates containing mannose, fucose, or GlcNAc (4-7). The receptor recycles between the plasma membrane and early endosomes (8). Functions include a role in antigen cross-presentation, clearance of endogenous proteins, pathogen detection, and trafficking through lymphatic vessels (9-12).

Background References

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3. Wileman, T.E. et al. (1986) *Proc Natl Acad Sci U S A* 83, 2501-5.
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5. Fiete, D.J. et al. (1998) *Proc Natl Acad Sci U S A* 95, 2089-93.
6. Napper, C.E. et al. (2006) *Biochem J* 395, 579-86.
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9. Burgdorf, S. et al. (2006) *J Immunol* 176, 6770-6.
10. Lee, S.J. et al. (2002) *Science* 295, 1898-901.
11. Milone, M.C. and Fitzgerald-Bocarsly, P. (1998) *J Immunol* 161, 2391-9.
12. Marttila-Ichihara, F. et al. (2008) *Blood* 112, 64-72.

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

Cross-Reactivity Key

H: Human

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Limited Uses

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