



Anti-Mouse M-CSF R (#7M23)

20180411BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	103-M37
Size:	100 µg
Lot. No.:	According to product label

Preparation: This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a mouse) immunized with human recombinant protein of M-CSF R extracellular domain.

Target Background

Synonyms (Target):	CSF1; MCSF; CSF-1
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M-CSF receptor, the product of the *c-fms* protooncogene, is a member of the type III subfamily of receptor tyrosine kinases that also includes receptors for SCF and PDGF. These receptors each contain five immunoglobulinlike domains in their extracellular domain (ECD) and a split kinase domain in their intracellular region. M-CSF receptor is expressed primarily on cells of the monocyte/macrophage lineage, dendritic cells, stem cells and in the developing placenta. Human M-CSF receptor cDNA encodes a 972 amino acid (aa) type I membrane protein with a 19 aa signal peptide, a 493 aa extracellular region containing the ligandbinding domain, a 25 aa transmembrane domain, and a 435 aa cytoplasmic domain. The human MCSF R ECD shares 60%, 64%, 72%, 75%, 75%, and 76% aa identity with mouse, rat, bovine, canine, feline, and equine M-CSF R, respectively. Activators of protein kinase C induce TACE/ADAM17 cleavage of the MCSF receptor, releasing the functional ligandbinding extracellular domain. M-CSF binding induces receptor homodimerization, resulting in transphosphorylation of specific cytoplasmic tyrosine residues and signal transduction. The intracellular domain of activated MCSF R binds more than 150 proteins that affect cell proliferation, survival, differentiation and cytoskeletal reorganization. Among these, PI3-Kinase, P42/44 ERK, and cCbl are key transducers of M-CSF-R signals. M-CSF R engagement is continuously required for macrophage survival and regulates lineage decisions and maturation of monocytes, macrophages, osteoclasts, and DC. M-CSF -R and integrin $\alpha\beta3$ share signaling pathways during osteoclastogenesis and deletion of either causes osteopetrosis. In the brain, microglia expressing increased M-CSF-R are concentrated with Alzheimers $\alpha\beta$ peptide, but their role in pathogenesis is unclear.

Database References Target

Protein RefSeq:	NP_001032948.2
Uniprot ID:	P09581
mRNA RefSeq:	NM_001037859.2.

Product Specifications

Host	Rat
Reactivity against	Mouse
Clonality	Monoclonal Antibody
Clone	(#7M23)
Isotype	IgG2
Purification	Protein G chromatography
Antigen	recombinant mouse M-CSFR EC domain
Formulation	lyophilized
Reconstitution buffer	PBS

Reconstitution: Reconstitute the antibody with 500 µl sterile PBS and the final concentration is 200 µg/ml.

Stability: Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20 °C for at least for six months without detectable loss of activity.

Remarks: This antibody recognizes mouse M-CSF R by direct ELISAs and WB.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

The antibody can be used within the following applications:

WB, FC

Recommended usage:

WB: 1:1000-2000

FC: Yes

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!