Anti-Mouse M-CSF

20150223ML

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**103-P63G**
Size:	100 µg
Lot. No.:	According to product label

Preparation: Produced from sera of goats pre-immunized with highly pure (>98%) recombinant mM-CSF (Murine M-CSF). Anti-mM-CSF specific antibody was purified by affinity chromatography employing immobilized mM-CSF matrix.

Target Background

Synonyms (Target):	Csf1

M-CSF, also known as CSF-1, is a four-α helical-bundle cytokine that is the primary regulator of macrophage survival, proliferation and differentiation. M-CSF is also essential for the survival and proliferation of osteoclast progenitors. M-CSF also primes and enhances macrophage killing of tumor cells and microorganisms, regulates the release of cytokines and other inflammatory modulators from macrophages, and stimulates pinocytosis. MCSF increases during pregnancy to support implantation and growth of the decidua and placenta. Sources of MCSF include fibroblasts, activated macrophages, endometrial secretory epithelium, bone marrow stromal cells, and activated endothelial cells. The M-CSF receptor (c-fms) transduces its pleotropic effects and mediates its endocytosis. M-CSF mRNAs of various sizes occur. Full length mouse MCSF transcripts encode a 520 amino acid (aa) type I transmembrane (TM) protein with a 462 aa extracellular region, a 21 aa TM domain, and a 37 aa cytoplasmic tail that forms a 140 kDa covalent dimer. Differential processing produces two proteolytically cleaved, secreted dimers. One is an Nand Oglycosylated 86 kDa dimer, while the other is modified by both glycosylation and chondroitinsulfate proteoglycan (PG) to generate a 200 kDa subunit. Although PGmodified M-CSF can circulate, it may be immobilized by attachment to type V collagen. Shorter transcripts encode M-CSF that lacks cleavage and PG sites and produces an N-glycosylated 68 kDa TM dimer and a slowly produced 44 kDa secreted dimer. Although forms may vary in activity and half-life, all contain the N-terminal 150 aa portion that is necessary and sufficient for interaction with the M-CSF receptor. The first 229 aa of mature mouse MCSF shares 87%, 83%, 82%, and 81% aa identity with corresponding regions of rat, dog, cow, and human MCSF, respectively. Human MCSF is active in the mouse, but mouse M-CSF is reported to be species-specific.

Database References Target

Protein RefSeq:	NP_031804.3
Uniprot ID:	P07141
mRNA RefSeq:	NM_007778

Product Specifications

Species reactivity	Mouse
Clone/Ab feature	Goat IgG
Cross reactivity	Mouse
Host	Goat
Clonality	Polyclonal Antibody
Purification	Antigen-affinity purified
Immunogen	Recombinant Mouse M-CSF
Formulation	lyophilized from PBS
Reconstitution buffer	water

Reconstitution: Reconstitute the antibody in sterile water to a concentration of 0.1 - 1.0 mg/ml.

Stability: The lyophilized antibody is stable for at least 2 years from date of receipt at -20°C. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot: To detect mM-CSF by Western Blot analysis this antibody can be used at a concentration of 0.1-0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant mM-CSF is 1.5-3.0 ng/lane, under either reducing or non-reducing conditions.

Neutralization: To yield one-half maximal inhibition [$\mathbf{ND_{50}}$] of the biological activity of mM-CSF (1.5 ng/ml), a concentration of 0.05 - 0.08 µg/ml of this antibody is required.

ELISA:
Indirect: To detect mM-CSF by indirect ELISA (using 100 µl/well antibody solution) a concentration of 0.5 - 2.0 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of at least 0.2 - 0.4 ng/well of recombinant mM-CSF.
Sandwich: To detect mM-CSF by sandwich ELISA (using 100 µl/well antibody solution) a concentration of 0.5 - 2.0 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with an appropriate secondary conjugated antibody, allows the detection of at least 0.2 - 0.4 ng/well of recombinant mM-CSF.

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