Mouse M-CSF Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF416

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse M-CSF in ELISAs and Western blots. In sandwich immunoassays, less than 0.05% cross-reactivity with rhM-CSF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse M-CSF (R&D Systems, Catalog # 416-ML) Lys33-Glu262 Accession # Q3U4F9
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse M-CSF (Catalog # 416-ML)
Mouse M-CSF Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse M-CSF Antibody (Catalog # MAB416)
ELISA Detection	0.1-0.4 µg/mL	Mouse M-CSF Biotinylated Antibody (Catalog # BAF416)
Standard		Recombinant Mouse M-CSF (Catalog # 416-ML)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

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 (1 - 3). M-CSF is also essential for the survival and proliferation of osteoclast progenitors (1, 4). 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 (2, 3). M-CSF increases during pregnancy to support implantation and growth of the decidua and placenta (5). Sources of M-CSF include fibroblasts, activated macrophages, endometrial secretory epithelium, bone marrow stromal cells and activated endothelial cells (1 - 5). The M-CSF receptor (*c-fms*) transduces its pleotropic effects and mediates its endocytosis. M-CSF mRNAs of various sizes occur (3 - 9). Full length mouse M-CSF 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 N- and O- glycosylated 86 kDa dimer, while the other is modified by both glycosylation and chondroitin-sulfate proteoglycan (PG) to generate a 200 kDa subunit. Although PG-modified M-CSF can circulate, it may be immobilized by attachment to type V collagen (8). 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 (7). 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 (10, 11). The first 229 aa of mature mouse M-CSF shares 87%, 83%, 82% and 81% aa identity with corresponding regions of rat, dog, cow and human M-CSF, respectively (12, 13). Human M-CSF is active in the mouse, but mouse M-CSF is reported to be species-specific.

References:

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