

Store at
-20C
#33444

Mouse CSF-1/M-CSF Recombinant Protein

10 µg

**Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
18.2**UniProt ID:**
#P07141**Entrez-Gene Id:**
12977

Background

Colony stimulating factor 1 (CSF-1)/macrophage colony stimulating factor (M-CSF) is produced by fibroblasts, endothelial cells, stromal cells, macrophages, osteoblasts, and other cell types (1). CSF-1/M-CSF is required for growth and differentiation of monocytes and macrophages (1,2). CSF-1/M-CSF polarizes macrophages into the M2 phenotype where anti-inflammatory IL-10 is produced, rather than the M1 phenotype where inflammatory cytokines are produced. CSF-1/M-CSF also recruits monocytes and enhances angiogenesis by inducing VEGF production (1,2). CSF-1/M-CSF binds to its receptor CSF1R; downstream signaling involves PI3K/Akt, Erk, and Stats 1, 3, and 5 (1,3). An increase in CSF-1/M-CSF expression may contribute to cancer progression, and high plasma CSF-1/M-CSF levels are associated with rheumatoid arthritis (1,4,5).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg mCSF-1/M-CSF.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant mouse CSF-1/M-CSF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant mCSF-1/M-CSF was determined in an NFS-60 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 10 ng/ml.

Background References

1. Hamilton, J.A. (2008) *Nat Rev Immunol* 8, 533-44.
2. Curry, J.M. et al. (2008) *PLoS One* 3, e3405.
3. Hamilton, J.A. (1997) *J Leukoc Biol* 62, 145-55.
4. Rioja, I. et al. (2008) *Arthritis Rheum* 58, 2257-67.
5. Skrzypski, M. et al. (2008) *Clin Cancer Res* 14, 4794-9.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

