#12251 Store at -20°C

Phospho-M-CSF Receptor (Tyr699) (D10B11) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #1436
Swiss-Prot Acc. #P07333

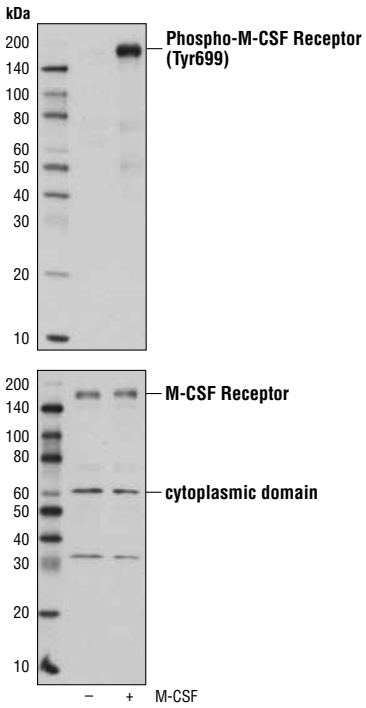
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP	H	175 kDa	Rabbit IgG**
Endogenous			

Background: Macrophage-colony stimulating factor (M-CSF, CSF-1) receptor is an integral membrane tyrosine kinase encoded by the c-fms proto-oncogene. M-CSF receptor is expressed in monocytes (macrophages and their progenitors) and drives growth and development of this blood cell lineage. (1-3). Binding of M-CSF to its receptor induces receptor dimerization, activation and autophosphorylation of cytoplasmic tyrosine residues used as docking sites for SH2-containing signaling proteins (4). There are at least five major tyrosine autophosphorylation sites. Tyr723 (Tyr721 in mouse) is located in the kinase insert (KI) region. Phosphorylated Tyr723 binds the p85 subunit of PI3 kinase as well as PLCγ 2 (5). Phosphorylation of Tyr809 provides a docking site for Shc (5). Overactivation of this receptor can lead to a malignant phenotype in various cell systems (6). The activated M-CSF receptor has been shown to be a predictor of poor outcome in advanced epithelial ovarian carcinoma (7) and breast cancer (8).

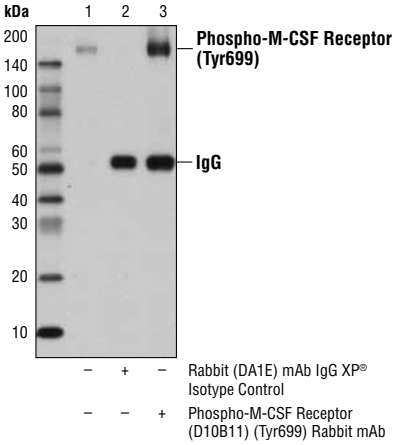
Phosphorylation of M-CSF receptor on Tyr669 was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for phosphorylation site discovery, as well as in another publication (10). Autophosphorylation at Tyr699 in the kinase insert (KI) domain appears to provide a binding site for the Grb2 adaptor protein (9).

Specificity/Sensitivity: Phospho-M-CSF Receptor (Tyr699) (D10B11) Rabbit mAb detects endogenous levels of M-CSF receptor only when phosphorylated at Tyr699. This antibody may cross-react with other activated tyrosine kinases including PDGF receptors and EGFR.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr699 of human M-CSF Receptor protein.



Western blot analysis of extracts from GDM1 cells, serum-starved overnight and untreated (-) or treated with Human Macrophage Colony Stimulating Factor (hM-CSF) #8929 (100 ng/ml, 10 min; +), using Phospho-M-CSF Receptor (Tyr699) (D10B11) Rabbit mAb (upper) or M-CSF Receptor Antibody #3152 (lower).



Immunoprecipitation of Phospho-M-CSF receptor from M-CSF stimulated GDM1 cell extracts, using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Phospho-M-CSF Receptor (Tyr699) (D10B11) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using Phospho-M-CSF Receptor (Tyr699) (D10B11) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Stanley, E. R. et al. (1978) *Nature* 274, 168-170.
(2) Byrne, P. V. et al. (1981) *J. Cell. Biol.* 91, 848-853.
(3) Bourette, R. P. et al. (2000) *Growth Factors* 17, 155-166.
(4) Novak, U. et al. (1996) *Oncogene* 13, 2607-2613.
(5) Bourette, R. P. et al. (1997) *EMBO J.* 16, 5880-5893.
(6) Morley, G. M. et al. (1999) *Oncogene* 18, 3076-3084.
(7) Toy, E. P. et al. (2001) *Gynecol. Oncol.* 80, 194-200.
(8) Maher, M. G. et al. (1998) *Clin. Cancer Res.* 4, 1851-1856.
(9) Hamilton, J.A. (1997) *J Leukoc Biol* 62, 145-55.
(10) Downing, J.R. et al. (1991) *Mol Cell Biol* 11, 2489-95.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.