

Phospho-M-CSF Receptor (Tyr708) Antibody

100 µl
 (10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

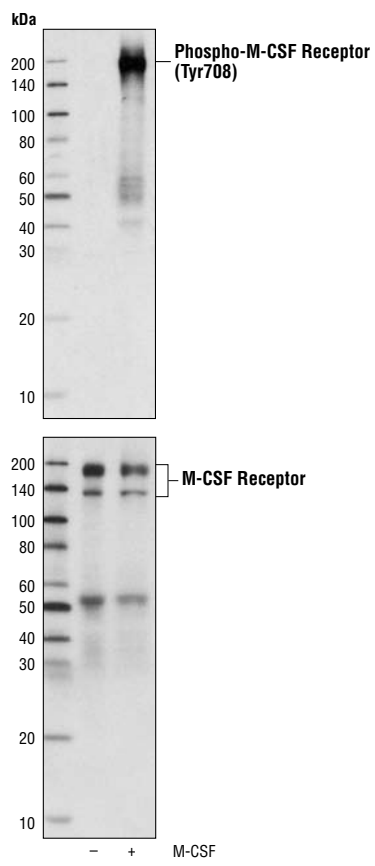
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Transfected	H, M	175 kDa	Rabbit**

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 PLC-γ 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).

Tyr708 (Tyr706 in mouse) is located in the KI region of M-CSF receptor. Phosphorylation of Tyr708 may influence the binding of PI3 kinase to the activated M-CSF receptor (9).

Specificity/Sensitivity: Phospho-M-CSF Receptor (Tyr708) Antibody detects transfected levels of M-CSF receptors only when phosphorylated at Tyr708. This antibody may cross-react with other activated protein tyrosine kinases including insulin and EGF receptors.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr708 of human M-CSF receptor. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from Bac1.2F5 cells, untreated or stimulated with M-CSF, using Phospho-M-CSF Receptor (Tyr708) Antibody (upper) or M-CSF Receptor Antibody #3152 (lower).

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

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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

For application 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 companion 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) Downing, J.R. et al. (1991) *Mol. Cell Biol.* 11, 2489–2495.

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.