

#14591 Store at -20°C

Phospho-CSF-1R/M-CSF-R (Tyr708) (D5F4Y) Rabbit mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	175	Rabbit IgG	#P07333	1436

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

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.*

Specificity / Sensitivity

Phospho-CSF-1R/M-CSF-R (Tyr708) (D5F4Y) Rabbit mAb recognizes endogenous levels of CSF-1R/M-CSF-R only when phosphorylated at Tyr708. This antibody may cross-react with other activated protein tyrosine kinases such as phospho-Src.

Species predicted to react based on 100% sequence homology:

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr708 of human CSF-1R/M-CSF-R protein.

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 PLCy2 (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).

Background References

1. Stanley, E.R. et al. (1978) *Nature* 274, 168-70.
2. Byrne, P.V. et al. (1981) *J Cell Biol* 91, 848-53.
3. Bourette, R.P. and Rohrschneider, L.R. (2000) *Growth Factors* 17, 155-66.
4. Novak, U. et al. (1996) *Oncogene* 13, 2607-13.
5. Bourette, R.P. et al. (1997) *EMBO J* 16, 5880-93.
6. Morley, G.M. et al. (1999) *Oncogene* 18, 3076-84.
7. Toy, E.P. et al. (2001) *Gynecol Oncol* 80, 194-200.
8. Maher, M.G. et al. (1998) *Clin Cancer Res* 4, 1851-6.
9. Downing, J.R. et al. (1991) *Mol Cell Biol* 11, 2489-95.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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