ABCLONAL BIOTECHNOLOGY,INC.

M-CSF Receptor Rabbit pab Antibody

Anti M-CSF Receptor antibody

Catalog Number:	A0736	**Quantity:**	100ul
Lot Number:	A00009	**Species:**	Rabbit
Gene ID:	1436	**Swiss Prot:**	P07333

DESCRIPTION

Description Rabbit polyclonal to Human M-CSF Receptor
Species Rabbit
Applications WB FC
Reactivity H
Immunogen A recombinant protein of human M-CSF Receptor
Other Name CD_antigen=CD115; Flags: Precursor; Proto-oncogene c-Fms; Macrophage colony-stimulating factor 1 receptor;CSF-1-R; FMS;CSF1R;

PROPERTIES

Form Liquid
Storage instructions Upon delivery aliquot and store at -20ºC or -80ºC.
Storage buffer PBS with 0.1% Sodium Azide, 50% Glycerol,
Purity Affinity purification
Clonality Polyclonal
Isotype IgG

APPLICATION

WB WB :1/200-500
FC FC:1/10-50

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).

After initial dimerization and autophosphorylation, the CSF-1 receptor undergoes regulated intramembrane proteolysis (RIP) which involves proteolytic processing of this membrane protein and results in release of extracellular domain, intramembrane cleavage and release of the cytoplasmic domain into the cytosol (9). The activated intracellular domain then moves to the nucleus and regulates transcription of specifc genes (10). It has been shown that the processing and down modulation of CSF-1 receptor is a continuous process and its rate increases subtantially in response to a variety of stimuli including PMA, LPS, tumor necrosis factor, IL-2, Il-4 and its physiological ligand CSF-1 (9).

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. Wilhelmsen, K. et al. (2004) *Mol. Cell. Biol.* 24(1) , 454-464.
10. Urban, S. et al. (2002) *Curr. Opin. Genet. Dev.* 12, 512-518.