Phospho-M-CSF Receptor (Tyr723) (49C10) Rabbit mAb

For Research Use Only. Not For Use In Diagnostic Procedures.

**Applications**

<table>
<thead>
<tr>
<th>Species</th>
<th>Cross-Reactivity</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
</tr>
</thead>
<tbody>
<tr>
<td>W, IP, IHC-P</td>
<td>Endogenous</td>
<td>175 kDa</td>
<td>Rabbit IgG**</td>
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</table>

**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 on M-CSF. Tyr723 (Tyr721 in mouse) is located in the kinase insert (K) domain. Phosphorylated Tyr723 binds the p85 subunit of PI3 kinase as well as PLC-γ2 (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).

**Recommended Antibody Dilutions:**

- Western blotting: 1:1000
- Immunoprecipitation: 1:200
- Immunohistochemistry (Paraffin): 1:300†

**Unmasking buffer:** EDTA

**Antibody Diluent:** SignalStain® Antibody Diluent #8112

**Detection reagent:** SignalStain® Boost HRP, Rabbit #8114

**Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.**

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

**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.
Immunohistochemical analysis of paraffin-embedded FDCP1/fms cells, untreated (left) or mCSF-treated (right), using Phospho-M-CSF Receptor (Tyr723) (49C10) Rabbit mAb.

Background References: