

MP1 (FL-124): sc-9136

BACKGROUND

MP1 (MEK partner 1) functions as a scaffolding protein in the mitogen activated protein (MAP) kinase signaling pathway. Growth factor induced MAP kinase activation is selectively mediated by the extracellular signal-regulated kinase (ERK) cascade. This pathway is dependent on the phosphorylation of MEK-1 and its subsequent activation of ERK 1. MP1 binds to the proline-rich domain of MEK-1 and thereby potentiates the phosphorylation of MEK-1 by the activating MEK kinase B-Raf. MP1 is also able to enhance the kinase activity of MEK-1 and facilitate the phosphorylation of ERK 1. *In vivo* studies indicate that MP1 preferentially associates with MEK-1 and ERK 1, but not with MEK-2 or ERK 2, suggesting that MP1 and other scaffolding proteins contribute to the specificity of the kinase substrates within the MAPK pathways.

REFERENCES

1. Elion, E.A. 1998. Routing MAP kinase cascades. *Science* 281: 1625-1626.
2. Schaeffer, H.J., et al. 1998. MP1: a MEK binding partner that enhances enzymatic activation of the MAP kinase cascade. *Science* 281: 1668-1671.
3. Whitmarsh, A.J., et al. 1998. A mammalian scaffold complex that selectively mediates MAP kinase activation. *Science* 281: 1671-1674.

CHROMOSOMAL LOCATION

Genetic locus: LAMTOR3 (human) mapping to 4q23; Lamtor3 (mouse) mapping to 3 G3.

SOURCE

MP1 (FL-124) is a rabbit polyclonal antibody raised against amino acids 1-124 representing full length MP1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MP1 (FL-124) is recommended for detection of MP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MP1 (FL-124) is also recommended for detection of MP1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MP1 siRNA (h): sc-40746, MP1 siRNA (m): sc-40747, MP1 shRNA Plasmid (h): sc-40746-SH, MP1 shRNA Plasmid (m): sc-40747-SH, MP1 shRNA (h) Lentiviral Particles: sc-40746-V and MP1 shRNA (m) Lentiviral Particles: sc-40747-V.

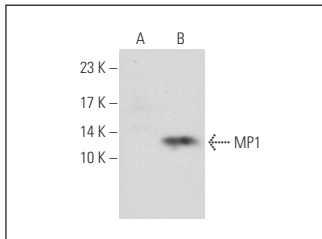
Molecular Weight of MP1: 14 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243 or MP1 (m): 293T Lysate: sc-121727.

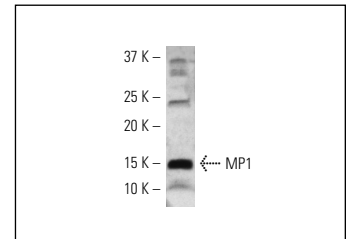
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MP1 (FL-124): sc-9136. Western blot analysis of MP1 expression in non-transfected: sc-117752 (A) and mouse MP1 transfected: sc-121727 (B) 293T whole cell lysates.



MP1 (FL-124): sc-9136. Western blot analysis of MP1 expression in 3T3-L1 whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **MP1 (H-6): sc-376783** or **MP1 (B-12): sc-25345**, our highly recommended monoclonal alternatives to MP1 (FL-124).