

# p-MEK-6 (Ser 202): sc-130204

## BACKGROUND

A family of protein kinases located upstream of the MAP kinases and responsible for their activation has been identified. The prototype member of this family, designated MAP kinase kinase, or MEK-1, specifically phosphorylates the MAP kinase regulatory threonine and tyrosine residues present in the Thr-Glu-Tyr motif of ERK. A second MEK family member, MEK-2, resembles MEK-1 in its substrate specificity. MEK-3 (or MKK-3) functions to activate p38 MAP kinase, and MEK-4 (also called SEK1 or MKK-4) activates both p38 and JNK MAP kinases. MEK-5 appears to specifically phosphorylate ERK 5, whereas MEK-6 phosphorylates p38 and p38 $\beta$ . MEK-7 (or MKK-7) phosphorylates and activates the JNK signal transduction pathway. MEK-6 is subject to autophosphorylation on select amino acid residues, including Ser 202.

## REFERENCES

1. Crews, C.M., et al. 1992. The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. *Science* 258: 478-480.
2. Wu, J., et al. 1993. Identification and characterization of a new mammalian mitogen-activated protein kinase kinase, Mkk2. *Mol. Cell. Biol.* 13: 4539-4548.
3. Dérillard, B., et al. 1995. Independent human MAP-kinase signal transduction pathways defined by MEK and MKK isoforms. *Science* 267: 682-685.
4. Zhou, G., et al. 1995. Components of a new human protein kinase signal transduction pathway. *J. Biol. Chem.* 270: 12665-12669.
5. Han, J., et al. 1996. Characterization of the structure and function of a novel MAP kinase kinase (MKK6). *J. Biol. Chem.* 271: 2886-2891.
6. Jiang, Y., et al. 1996. Characterization of the structure and function of a new mitogen-activated protein kinase (p38 $\beta$ ). *J. Biol. Chem.* 271: 17920-17926.
7. Sullivan, J.E., et al. 2005. Prevention of MKK6-dependent activation by binding to p38 $\alpha$  MAP kinase. *Biochemistry* 44: 16475-16490.
8. Jörgl, A., et al. 2007. Human Langerhans-cell activation triggered *in vitro* by conditionally expressed MKK6 is counterregulated by the downstream effector RelB. *Blood* 109: 185-193.
9. Arning, L., et al. 2008. ASK1 and MAP2K6 as modifiers of age at onset in Huntington's disease. *J. Mol. Med.* 86: 485-490.

## CHROMOSOMAL LOCATION

Genetic locus: MAP2K6 (human) mapping to 17q24.3.

## SOURCE

p-MEK-6 (Ser 202) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 202 phosphorylated MEK-6 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p-MEK-6 (Ser 202) is recommended for detection of Ser 202 phosphorylated MEK-6 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

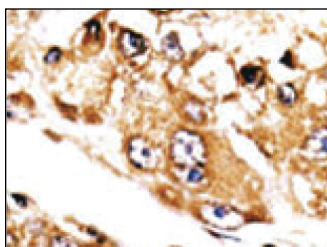
Suitable for use as control antibody for MEK-6 siRNA (h): sc-35913, MEK-6 shRNA Plasmid (h): sc-35913-SH and MEK-6 shRNA (h) Lentiviral Particles: sc-35913-V.

Molecular Weight of p-MEK-6: 37 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) 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. 2) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



p-MEK-6 (Ser 202): sc-130204. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cancer tissue showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

1. Scharf, M., et al. 2013. Mitogen-activated protein kinase-activated protein kinases 2 and 3 regulate SERCA2a expression and fiber type composition to modulate skeletal muscle and cardiomyocyte function. *Mol. Cell. Biol.* 33: 2586-2602.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.