

## MEK-5 (R-18): sc-9320

### 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 ERK5, whereas MEK-6 phosphorylates p38 and p38b. MEK-7 (or MKK-7) phosphorylates and activates the JNK signal transduction pathway.

### CHROMOSOMAL LOCATION

Genetic locus: MAP2K5 (human) mapping to 15q23; Map2k5 (mouse) mapping to 9 C.

### SOURCE

MEK-5 (R-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MEK-5 of rat origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-373 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

MEK-5 (R-18) is recommended for detection of MEK-5 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), 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).

MEK-5 (R-18) is also recommended for detection of MEK-5 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for MEK-5 siRNA (h): sc-35911, MEK-5 siRNA (m): sc-35912, MEK-5 shRNA Plasmid (h): sc-35911-SH, MEK-5 shRNA Plasmid (m): sc-35912-SH, MEK-5 shRNA (h) Lentiviral Particles: sc-35911-V and MEK-5 shRNA (m) Lentiviral Particles: sc-35912-V.

Molecular Weight of MEK-5 54 kDa.

Positive Controls: A-673 cell lysate: sc-2414, HeLa + serum-starved cell lysate: sc-24693 or Jurkat whole cell lysate: sc-2204.

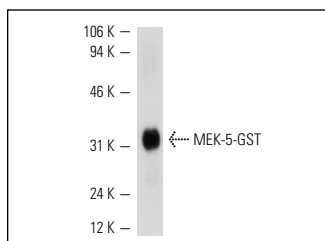
### STORAGE

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

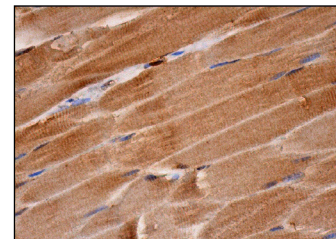
### RESEARCH USE

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

### DATA



MEK-5 (R-18): sc-9320. Western blot analysis of human recombinant MEK-5 fusion protein.



MEK-5 (R-18): sc-9320. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

### SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2004. Entire mitogen activated protein kinase (MAPK) pathway is present in preimplantation mouse embryos. *Dev. Dyn.* 231: 72-87.
- Liu, J., et al. 2004. Serine-threonine kinases and transcription factors active in signal transduction are detected at high levels of phosphorylation during mitosis in preimplantation embryos and trophoblast stem cells. *Reproduction* 128: 643-654.
- Nakamura, K., et al. 2010. Activity assays for extracellular signal-regulated kinase 5. *Methods Mol. Biol.* 661: 91-106.
- Han, C.K., et al. 2014. Dilong prevents the high-KCl cardioplegic solution administration-induced apoptosis in H9c2 cardiomyoblast cells mediated by MEK. *Am. J. Chin. Med.* 42: 1507-1519.
- Hsieh, Y.L., et al. 2014. Effects of garlic oil on interleukin-6 mediated cardiac hypertrophy in hypercholesterol-fed hamsters. *Chin. J. Physiol.* 57: 320-328.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **MEK-5 (E-3): sc-365198** or **MEK-5 (21): sc-135986**, our highly recommended monoclonal alternatives to MEK-5 (R-18).