

ERK 3 (I-15): sc-156



The Power to Question

BACKGROUND

Mitogen-activated protein kinase (MAPK) signaling pathways involve closely related MAP kinases, including extracellular-signal-related kinase 3 (ERK 3, also designated PRKM6 and p97MAPK). Serum, growth factors and phorbol esters can initiate ERK 3 signaling pathways. Despite lacking a definitive nuclear localization sequence, ERK 3 constitutively localizes to the nucleus upon activation. p38 pathway activation-dependent upregulation of ERK 3 is independent of the status of p53, Bcl2 and caspase 3 during cell stress and damage induced by proteasome inhibition, suggesting ERK 3 in part mediates intracellular defense or cell rescue. The human ERK3 gene maps to chromosome 15q21.2 and encodes a 721 amino acid protein.

CHROMOSOMAL LOCATION

Genetic locus: MAPK6 (human) mapping to 15q21.2; Mapk6 (mouse) mapping to 9 D.

SOURCE

ERK 3 (I-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ERK 3 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-156 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-156 PE, 100 tests.

Available as Alexa Fluor® 405 (sc-156 AF405), Alexa Fluor® 488 (sc-156 AF488) or Alexa Fluor® 647 (sc-156 AF647) conjugates for flow cytometry or immunofluorescence; 100 µg/2 ml.

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APPLICATIONS

ERK 3 (I-15) is recommended for detection of ERK 3 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

ERK 3 (I-15) is also recommended for detection of ERK 3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ERK 3 siRNA (h): sc-35337, ERK 3 siRNA (m): sc-35338, ERK 3 shRNA Plasmid (h): sc-35337-SH, ERK 3 shRNA Plasmid (m): sc-35338-SH, ERK 3 shRNA (h) Lentiviral Particles: sc-35337-V and ERK 3 shRNA (m) Lentiviral Particles: sc-35338-V.

Molecular Weight of ERK 3: 97 kDa.

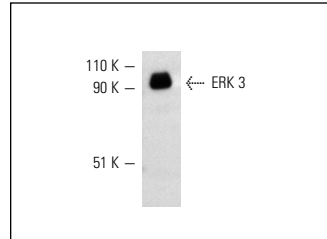
RESEARCH USE

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

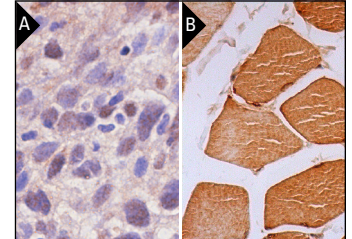
STORAGE

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

DATA



ERK 3 (I-15): sc-156. Western blot analysis of ERK 3 expression in PC-12 whole cell lysate.



ERK 3 (I-15): sc-156. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tumor (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic and nuclear staining of myocytes (B).

SELECT PRODUCT CITATIONS

1. Turgeon, B., et al. 2000. Cloning and characterization of mouse extracellular-signal-regulated protein kinase 3 as a unique gene product of 100 kDa. *Biochem. J.* 346: 169-175.
2. Coulombe, P., et al. 2003. Rapid turnover of extracellular signal-regulated kinase 3 by the ubiquitin-proteasome pathway defines a novel paradigm of mitogen-activated protein kinase regulation during cellular differentiation. *Mol. Cell. Biol.* 23: 4542-4558.
3. Schumacher, S., et al. 2004. Scaffolding by ERK3 regulates MK5 in development. *EMBO J.* 23: 4770-4779.
4. Bind, E., et al. 2004. A novel mechanism for mitogen-activated protein kinase localization. *Mol. Biol. Cell* 15: 4457-4466.
5. Quarto, N., et al. 2005. Gene profiling of cells expressing different FGF-2 forms. *Gene* 356: 49-68.
6. Tang, V.W. 2006. Proteomic and bioinformatic analysis of epithelial tight junction reveals an unexpected cluster of synaptic molecules. *Biol. Direct* 1: 37.
7. Kling, D.E., et al. 2006. Distribution of ERK 1/2 and ERK 3 during normal rat fetal lung development. *Anat. Embryol.* 211: 139-153.
8. Anhe, G.F., et al. 2006. ERK 3 associates with MAP2 and is involved in glucose-induced Insulin secretion. *Mol. Cell. Endocrinol.* 251: 33-41.



Try **ERK 3 (B-10): sc-365234** or **ERK 3 (G-2): sc-393371**, our highly recommended monoclonal alternatives to ERK 3 (I-15).