

ERK 3 (H-157): sc-10787

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 ERK3 signaling pathways. Despite lacking a definitive nuclear localization sequence, ERK3 constitutively localizes to the nucleus upon activation. p38 pathway activation-dependent up-regulation of ERK3 is independent of the status of p53, Bcl2, and caspase 3 during cell stress and damage induced by proteasome inhibition, suggesting ERK3 in part mediates intracellular defense or cell rescue. The human ERK3 gene maps chromosome 15q21.2 and encodes a 721 amino acid protein.

REFERENCES

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4. Kant, S., et al. 2006. Characterization of the atypical MAPK ERK 4 and its activation of the MAPK-activated protein kinase MK5. *J. Biol. Chem.* 281: 35511-35519.
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CHROMOSOMAL LOCATION

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

SOURCE

ERK 3 (H-157) is a rabbit polyclonal antibody raised against amino acids 565-721 mapping at the C-terminus of ERK 3 of human origin.

PRODUCT

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

Available as phycoerythrin (sc-10787 PE) conjugate for flow cytometry, 100 tests.

APPLICATIONS

ERK 3 (H-157) 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ERK 3 (H-157) is also recommended for detection of ERK 3 in additional species, including equine, canine, porcine and avian.

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.

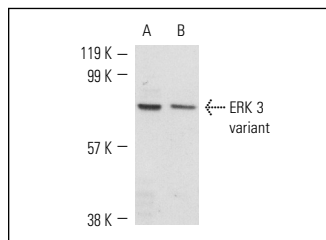
Molecular Weight of ERK 3: 97 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, KNRK nuclear extract: sc-2141 or PC-12 cell lysate: sc-2250.

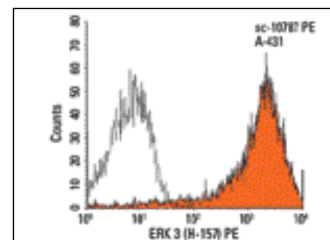
RECOMMENDED SECONDARY REAGENTS

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



ERK 3 (H-157): sc-10787. Western blot analysis of ERK 3 expression in KNRK nuclear extract (A) and SJRH30 whole cell lysate (B).



ERK 3 (H-157) PE: sc-10787 PE. Intracellular FCM analysis of fixed and permeabilized A431 cells. Black line histogram represents the isotype control, normal rabbit IgG: sc-3871.

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.