

MKP-4 (C-20): sc-20463

BACKGROUND

Mitogen-activated protein (MAP) kinases are a large class of proteins involved in signal transduction pathways that are activated by a range of stimuli and mediate a number of physiological and pathological changes in the cell. Dual specificity phosphatases (DSPs) are a subclass of the protein tyrosine phosphatase (PTP) gene superfamily, which are selective for dephosphorylating critical phosphothreonine and phosphotyrosine residues within MAP kinases. DSP gene expression is induced by a host of growth factors and/or cellular stresses, thereby negatively regulating MAP kinase superfamily members including MAPK/ERK, SAPK/JNK and p38. The members of the dual-specificity phosphatase protein family include MKP-1/CL100 (3CH134), VHR, PAC1, MKP-2, hVH-3 (B23), hVH-5, MKP-3, MKP-X and MKP-4. Human MKP-4 maps to chromosome Xq28 and encodes a 384 amino acid protein that selectivity inhibits members of the ERK family of MAP kinases and is expressed only in placenta, kidney and fetal liver.

CHROMOSOMAL LOCATION

Genetic locus: DUSP9 (human) mapping to Xq28; Dusp9 (mouse) mapping to X A7.3.

SOURCE

MKP-4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MKP-4 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.

Blocking peptide available for competition studies, sc-20463 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MKP-4 (C-20) is recommended for detection of MKP-4 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).

MKP-4 (C-20) is also recommended for detection of MKP-4 in additional species, including equine and canine.

Suitable for use as control antibody for MKP-4 siRNA (h): sc-39002, MKP-4 siRNA (m): sc-39003, MKP-4 shRNA Plasmid (h): sc-39002-SH, MKP-4 shRNA Plasmid (m): sc-39003-SH, MKP-4 shRNA (h) Lentiviral Particles: sc-39002-V and MKP-4 shRNA (m) Lentiviral Particles: sc-39003-V.

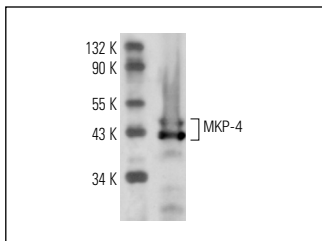
Molecular Weight of MKP-4: 42 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, JAR cell lysate: sc-2276 or HeLa whole cell lysate: sc-2200.

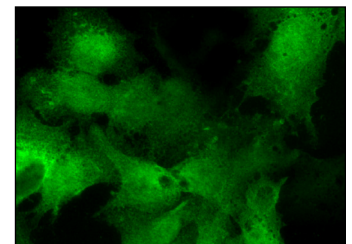
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MKP-4 (C-20): sc-20463. Western blot analysis of MKP-4 expression in Hep G2 whole cell lysate.



MKP-4 (C-20): sc-20463. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

- González-Fernández, L., et al. 2009. Identification of protein tyrosine phosphatases and dual-specificity phosphatases in mammalian spermatozoa and their role in sperm motility and protein tyrosine phosphorylation. *Biol. Reprod.* 80: 1239-1252.

STORAGE

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

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **MKP-4 (D-3): sc-137010**, our highly recommended monoclonal alternative to MKP-4 (C-20).