

MKP-2 (N-14): sc-74624

BACKGROUND

MKP-2 (MAP kinase phosphatase 2, Dual specificity protein phosphatase 4 (DUSP4)) is a phosphatase involved in the complex MAPKKK cascade. MKP-2 belongs to the protein-tyrosine phosphatase family (non-receptor class dual specificity subfamily) and contains one rhodanese domain and one tyrosine-protein phosphatase domain. A dual specificity protein phosphatase, MKP-2 has a stringent substrate specificity for MAPKs. It acts to regulate mitogenic signal transduction by dephosphorylating both Thr and Tyr residues on MAP kinases ERK 1 and ERK 2. Transcription factor E2F-1, which is responsible for mediating apoptosis and suppressing tumorigenesis, acts as a transcriptional regulator of MKP-2. E2F-1 is physically associated with the MKP-2 promoter and can transactivate the promoter of the MKP-2 gene. Specifically, E2F-1 binds to a perfect palindromic motif in the MKP-2 promoter. MKP-2 is an essential cell death mediator in the E2F-1 pathway and may lead to the development of new strategies for cancer treatment.

CHROMOSOMAL LOCATION

Genetic locus: DUSP4 (human) mapping to 8p12; Dusp4 (mouse) mapping to 8 A4.

SOURCE

MKP-2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MKP-2 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-74624 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-2 (N-14) is recommended for detection of MKP-2 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-2 (N-14) is also recommended for detection of MKP-2 in additional species, including bovine and porcine.

Suitable for use as control antibody for MKP-2 siRNA (h): sc-38998, MKP-2 siRNA (m): sc-38999, MKP-2 shRNA Plasmid (h): sc-38998-SH, MKP-2 shRNA Plasmid (m): sc-38999-SH, MKP-2 shRNA (h) Lentiviral Particles: sc-38998-V and MKP-2 shRNA (m) Lentiviral Particles: sc-38999-V.

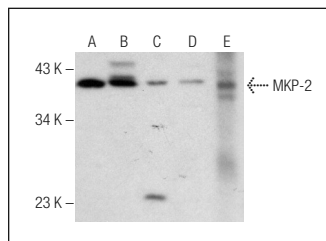
Molecular Weight of MKP-2: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat + PMA cell lysate: sc-24718 or RAW 264.7 whole cell lysate: sc-2211.

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-2 (N-14): sc-74624. Western blot analysis of MKP-2 expression in RAW 264.7 (A), SK-BR-3 (B), PMA treated Jurkat (C) and HeLa (D) whole cell lysates and rat spleen tissue extract (E).

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.



Try **MKP-2 (F-10): sc-17821** or **MKP-2 (48): sc-135991**, our highly recommended monoclonal alternatives to MKP-2 (N-14).