

# MKP-3 (G-12): sc-166041

## 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-3 maps to chromosome 12q21.33 and encodes a 381 amino acid protein that specifically inactivates members of the ERK family and is expressed in a variety of tissues with the highest levels in heart and pancreas.

## CHROMOSOMAL LOCATION

Genetic locus: DUSP6 (human) mapping to 12q21.33; Dusp6 (mouse) mapping to 10 D1.

## SOURCE

MKP-3 (G-12) is a mouse monoclonal antibody raised against amino acids 1-130 mapping at the N-terminus of MKP-3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

MKP-3 (G-12) is recommended for detection of MKP-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-3 (G-12) is also recommended for detection of MKP-3 in additional species, including canine.

Suitable for use as control antibody for MKP-3 siRNA (h): sc-39000, MKP-3 siRNA (m): sc-39001, MKP-3 shRNA Plasmid (h): sc-39000-SH, MKP-3 shRNA Plasmid (m): sc-39001-SH, MKP-3 shRNA (h) Lentiviral Particles: sc-39000-V and MKP-3 shRNA (m) Lentiviral Particles: sc-39001-V.

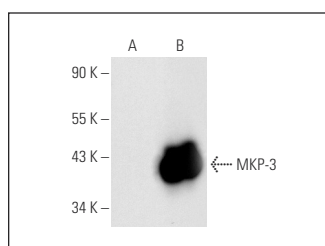
Molecular Weight of MKP-3: 42 kDa.

Positive Controls: MKP-3 (h2): 293 Lysate: sc-176263 or MKP-3 (m): 293T Lysate: sc-121681.

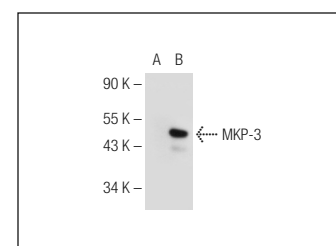
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



MKP-3 (G-12): sc-166041. Western blot analysis of MKP-3 expression in non-transfected: sc-117752 (A) and mouse MKP-3 transfected: sc-121681 (B) 293T whole cell lysates.



MKP-3 (G-12): sc-166041. Western blot analysis of MKP-3 expression in non-transfected: sc-110760 (A) and human MKP-3 transfected: sc-176263 (B) 293 whole cell lysates.

## SELECT PRODUCT CITATIONS

- Suares, A., et al. 2017. Antiproliferative effects of Bortezomib in endothelial cells transformed by viral G protein-coupled receptor associated to Kaposi's sarcoma. *Cell. Signal.* 32: 124-132.

## RESEARCH USE

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

## PROTOCOLS

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



See **MKP-3 (F-12): sc-377070** for MKP-3 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.