MKP-5 (G-10): sc-374276

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. MKP-5 preferentially binds to p38, but also to SAPK/JNK. It is ubiquitously expressed and localizes to both the cytoplasm and the nucleus. MKP-5 has been implicated in cell proliferation and apoptosis, tumor invasion and immune responses.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: DUSP10 (human) mapping to 1q41; Dusp10 (mouse) mapping to 1 H5.

SOURCE
MKP-5 (G-10) is a mouse monoclonal antibody raised against amino acids 1-205 mapping at the N-terminus of MKP-5 of human origin.

PRODUCT
Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. MKP-5 (G-10) is available conjugated to agarose (sc-374276 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374276 HRP), 200 µg/ml, for WB, IHC/IP and ELISA; to either phycoerythrin (sc-374276 PE), fluorescein (sc-374276 FITC), Alexa Fluor® 488 (sc-374276 AF488), Alexa Fluor® 546 (sc-374276 AF546), Alexa Fluor® 594 (sc-374276 AF594) or Alexa Fluor® 647 (sc-374276 AF647), 200 µg/ml, for WB (RGB), IF, IHC/IP and FCM; and to either Alexa Fluor® 680 (sc-374276 AF680) or Alexa Fluor® 790 (sc-374276 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS
MKP-5 (G-10) is recommended for detection of MKP-5 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of MKP-5: 53 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 3T3-L1 cell lysate: sc-2243 or WEHI-231 whole cell lysate: sc-2213.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG 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-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA
MKP-5 (G-10) sc-374276. Western blot analysis of MKP-5 expression in HeLa (A), 3T3-L1 (B), WEHI-231 (C), TT (D), DU 145 (E) and PC-3 (F) whole cell lysates. MKP-5 (G-10) sc-374276. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells and myoepithelial cells (B).

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.