

DUSP13 (C-4): sc-376417

BACKGROUND

Mitogen-activated protein (MAP) kinases are a large class of proteins involved in signal transduction pathways, which are activated by a range of stimuli and mediate a number of physiological and pathological changes in the cell. Dual specificity phosphatases (DUSPs) are a subclass of the protein tyrosine phosphatase (PTP) gene superfamily, which are selective for dephosphorylating critical phosphothreonine and phosphotyrosine residues within MAP kinases. DUSP 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. DUSP13, also designated TMDP or SKRP4, is abundantly expressed in testis with lower expression in skeletal muscle. DUSP13 is thought to be involved in the regulation of meiosis and/or differentiation of testicular germ cells during spermatogenesis.

REFERENCES

1. Keyse, S.M. 1995 An emerging family of dual specificity MAP kinase phosphatases. *Biochim. Biophys. Acta* 1265: 152-160.
2. Martell, K.J., et al. 1995. hVH-5: a protein tyrosine phosphatase abundant in brain that inactivates mitogen-act protein kinase. *J. Neurochem.* 65: 1823-1833.
3. Sun, H. 1998. Functional studies of dual-specificity phosphatases. *Methods Mol. Biol.* 84: 307-318.
4. Nakamura, K., et al. 1999. Molecular cloning and characterization of a novel dual-specificity protein phosphatase possibly involved in spermatogenesis. *Biochem. J.* 344: 819-825.
5. Camps, M., et al. 2000. Dual specificity phosphatases: a gene family for control of MAP kinase function. *FASEB J.* 14: 6-16.

CHROMOSOMAL LOCATION

Genetic locus: DUSP13 (human) mapping to 10q22.2.

SOURCE

DUSP13 (C-4) is a mouse monoclonal antibody raised against amino acids 1-138 mapping at the N-terminus of DUSP13 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DUSP13 (C-4) is available conjugated to agarose (sc-376417 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376417 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376417 PE), fluorescein (sc-376417 FITC), Alexa Fluor® 488 (sc-376417 AF488), Alexa Fluor® 546 (sc-376417 AF546), Alexa Fluor® 594 (sc-376417 AF594) or Alexa Fluor® 647 (sc-376417 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376417 AF680) or Alexa Fluor® 790 (sc-376417 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DUSP13 (C-4) is recommended for detection of DUSP13 of 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).

Suitable for use as control antibody for DUSP13 siRNA (h): sc-90507, DUSP13 shRNA Plasmid (h): sc-90507-SH and DUSP13 shRNA (h) Lentiviral Particles: sc-90507-V.

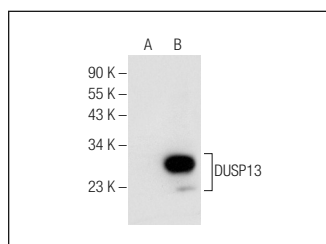
Molecular Weight of DUSP13 isoforms: 22/32/36/28/21 kDa.

Positive Controls: DUSP13 (h3): 293T Lysate: sc-158459.

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



DUSP13 (C-4): sc-376417. Western blot analysis of DUSP13 expression in non-transfected: sc-117752 (A) and human DUSP13 transfected: sc-158459 (B) 293T whole cell lysates.

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.

PROTOCOLS

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