

DUSP5 (C-18): sc-46926

BACKGROUND

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), MKP-2, MKP-3, MKP-4, MKP-5, MKP-6, MKP-7, MKP-X, VHR, VH-1, PAC1, hVH-3 (B23), hVH-5, PYST2, DUSP1, DUSP5, DUSP8, PIR1 and SKRP1. DUSP5 is a nuclear phospho-protein that displays phosphatase activity toward several different substrates. It shows the highest relative activity toward ERK1.

CHROMOSOMAL LOCATION

Genetic locus: DUSP5 (human) mapping to 10q25.2; Dusp5 (mouse) mapping to 19 D2.

SOURCE

DUSP5 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DUSP5 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-46926 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DUSP5 (C-18) is recommended for detection of DUSP5 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).

DUSP5 (C-18) is also recommended for detection of DUSP5 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for DUSP5 siRNA (h): sc-60554, DUSP5 siRNA (m): sc-60555, DUSP5 shRNA Plasmid (h): sc-60554-SH, DUSP5 shRNA Plasmid (m): sc-60555-SH, DUSP5 shRNA (h) Lentiviral Particles: sc-60554-V and DUSP5 shRNA (m) Lentiviral Particles: sc-60555-V.

Molecular Weight (predicted) of DUSP5: 42 kDa.

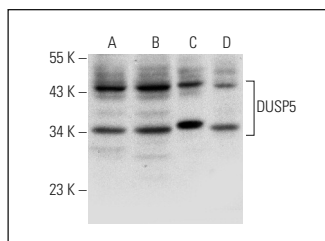
Molecular Weight (observed) of DUSP5: 35-44 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, HCT-116 whole cell lysate: sc-364175 or K-562 whole cell lysate: sc-2203.

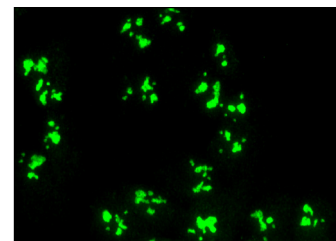
RECOMMENDED SECONDARY REAGENTS

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



DUSP5 (C-18): sc-46926. Western blot analysis of DUSP5 expression in MDA-MB-231 (A), HCT-116 (B) and K-562 (C) whole cell lysates and HL-60 nuclear extract (D).



DUSP5 (C-18): sc-46926. Immunofluorescence staining of formalin-fixed HepG2 cells showing nucleolar localization.

SELECT PRODUCT CITATIONS

1. Casar, B., et al. 2012. Mxi2 sustains ERK1/2 phosphorylation in the nucleus by preventing ERK1/2 binding to phosphatases. *Biochem. J.* 441: 571-578.

RESEARCH USE

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

PROTOCOLS

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

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Try **DUSP5 (H-9): sc-393801**, our highly recommended monoclonal alternative to DUSP5 (C-18).