

DUSP8 (H-45): sc-135200

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. DUSP8 inactivates SAPK/JNK and p38, is expressed predominantly in the adult brain, heart and skeletal muscle. It localizes in the cytoplasm, and is induced by nerve growth factor and Insulin. DUSP8 may play a role in pathophysiological mechanisms leading to development of alcohol dependence.

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., Seasholtz, A.F., Kwak, S.P., Clemens, K.K. and Dixon, J.E. 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: 307-18.
4. Camps, M., Nichols, A. and Arkinstall, S. 2000. Dual specificity phosphatases: a gene family for control of MAP kinase function. *FASEB J.* 14: 6-16.
5. Hink, R.L., Hokanson, J.E., Shah, I., Long, J.C., Goldman, D. and Sikela, J.M. 2003. Investigation of DUSP8 and CALCA in alcohol dependence. *Addict. Biol.* 8: 305-312.

CHROMOSOMAL LOCATION

Genetic locus: DUSP8 (human) mapping to 11p15.5; Dusp8 (mouse) mapping to 7 F5.

SOURCE

DUSP8 (H-45) is a rabbit polyclonal antibody raised against amino acids 90-134 mapping within an internal region of DUSP8 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.

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.

APPLICATIONS

DUSP8 (H-45) is recommended for detection of DUSP8 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).

DUSP8 (H-45) is also recommended for detection of DUSP8 in additional species, including canine and bovine.

Suitable for use as control antibody for DUSP8 siRNA (h): sc-60556, DUSP8 siRNA (m): sc-60557, DUSP8 shRNA Plasmid (h): sc-60556-SH, DUSP8 shRNA Plasmid (m): sc-60557-SH, DUSP8 shRNA (h) Lentiviral Particles: sc-60556-V and DUSP8 shRNA (m) Lentiviral Particles: sc-60557-V.

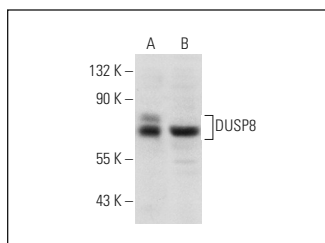
Molecular Weight of DUSP8: 66 kDa.

Positive Controls: Ramos cell lysate: sc-2216, SK-N-SH cell lysate: sc-2410 or U-87 MG cell lysate: sc-2411.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DUSP8 (H-45): sc-135200. Western blot analysis of DUSP8 expression in SK-N-SH (A) and Ramos (B) whole cell lysates.

RESEARCH USE

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



Try **DUSP8 (B-9): sc-271250**, our highly recommended monoclonal alternative to DUSP8 (H-45).