

DUSP8 (B-9): sc-271250



The Power to Question

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, and 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., et al. 1995. hVH-5: a protein tyrosine phosphatase abundant in brain that inactivates mitogen-activated protein kinase. *J. Neurochem.* 65: 1823-1833.

CHROMOSOMAL LOCATION

Genetic locus: DUSP8 (human) mapping to 11p15.5.

SOURCE

DUSP8 (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 18-43 near the N-terminus of DUSP8 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271250 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

DUSP8 (B-9) is recommended for detection of DUSP8 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), 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).

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

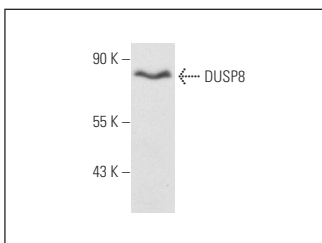
Molecular Weight of DUSP8: 66 kDa.

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

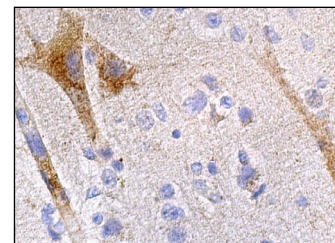
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DUSP8 (B-9): sc-271250. Western blot analysis of DUSP8 expression in SK-N-SH whole cell lysate.



DUSP8 (B-9): sc-271250. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Lin, K.M., et al. 2020. Dysregulation of dual-specificity phosphatases by Epstein-Barr virus LMP1 and its impact on lymphoblastoid cell line survival. *J. Virol.* 94: e01837-19.
2. Liu, R., et al. 2020. Mice lacking DUSP6/8 have enhanced ERK1/2 activity and resistance to diet-induced obesity. *Biochem. Biophys. Res. Commun.* 533: 17-22.

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.