

HSMNP1 (H-7): sc-376178

BACKGROUND

HSMNP1 (hypothalamus protein 1), also known as DBNDD2 (Dysbindin domain-containing protein 2) or CK1BP (casein kinase I binding protein), is a 261 amino acid member of the dysbindin family and is a paralog of dysbindin, a protein trafficking protein involved in lysosome biosynthesis that has been associated with schizophrenia and muscular dystrophy. Human and rat HSMNP1 share 86% identity and both proteins contain three casein kinase II and PKC (protein kinase C) phosphorylation sites, a putative N-glycosylation site and a PEST motif at the C-terminus. HSMNP1 is a cytoplasmic protein and it specifically localizes to vesicles during the induction of apoptosis. In addition, HSMNP1 may be involved in normal as well as pathological myeloid development. Two isoforms of HSMNP1 exist due to alternative splicing events.

REFERENCES

1. Benson, M.A., et al. 2001. Dysbindin, a novel coiled-coil-containing protein that interacts with the dystrobrevins in muscle and brain. *J. Biol. Chem.* 276: 24232-24241.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611453. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Talbot, K., et al. 2004. Dysbindin-1 is reduced in intrinsic, glutamatergic terminals of the hippocampal formation in schizophrenia. *J. Clin. Invest.* 113: 1353-1363.
4. Lucas, T., et al. 2005. The human orthologue of a novel apoptosis response gene induced during rat myelomonocytic stem cell apoptosis maps to 20q13.12. *Stem Cells Dev.* 14: 556-563.
5. Yin, H., et al. 2006. Dysbindin structural homologue CK1BP is an isoform-selective binding partner of human casein kinase-1. *Biochemistry* 45: 5297-5308.
6. Pratscher, B., et al. 2008. Characterization of NKIP: A novel, Na⁺/K⁺-ATPase interacting protein mediates neural differentiation and apoptosis. *Exp. Cell Res.* 314: 463-477.

CHROMOSOMAL LOCATION

Genetic locus: DBNDD2 (human) mapping to 20q13.12; Dbndd2 (mouse) mapping to 2 H3.

SOURCE

HSMNP1 (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 129-161 within an internal region of HSMNP1 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

HSMNP1 (H-7) is recommended for detection of HSMNP1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HSMNP1 siRNA (h): sc-72046, HSMNP1 siRNA (m): sc-72912, HSMNP1 shRNA Plasmid (h): sc-72046-SH, HSMNP1 shRNA Plasmid (m): sc-72912-SH, HSMNP1 shRNA (h) Lentiviral Particles: sc-72046-V and HSMNP1 shRNA (m) Lentiviral Particles: sc-72912-V.

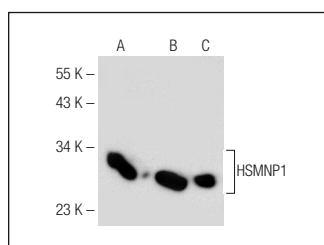
Molecular Weight of HSMNP1: 28 kDa.

Positive Controls: Human brain tissue extract, U-87 MG cell lysate: sc-2411 or H4 cell lysate: sc-2408.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HSMNP1 (H-7): sc-376178. Western blot analysis of HSMNP1 expression in human brain tissue extract (A) and U-87 MG (B) and H4 (C) 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.

PROTOCOLS

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