SANTA CRUZ BIOTECHNOLOGY, INC.

MPPED1 (D-2): sc-398972

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The Power to Question

BACKGROUND

MPPED1 (metallophosphoesterase domain containing 1), also known as C22orf1 or FAM1A, is a 326 amino acid protein that is expressed predominately in adult brain and may be involved in the development and function of the central nervous system. The gene encoding MPPED1 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

REFERENCES

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3. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. Am. J. Med. Genet. 88: 276-278.
4. Matsuda, A., et al. 2003. Large-scale identification and characterization of human genes that activate NFκB and MAPK signaling pathways. Oncogene 22: 3307-3318.
5. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. J. Med. Genet. 41: 529-534.
6. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. J. Hum. Genet. 51: 1037-1045.
7. Paylor, R., et al. 2006. Tbx1 haploinsufficiency is linked to behavioral disorders in mice and humans: implications for 22q11 deletion syndrome. Proc. Natl. Acad. Sci. USA 103: 7729-7734.

CHROMOSOMAL LOCATION

Genetic locus: MPPED1 (human) mapping to 22q13.2; Mpped1 (mouse) mapping to 15 E2.

SOURCE

MPPED1 (D-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 74-92 within an internal region of MPPED1 of human origin.

PRODUCT

Each vial contains 200 µg IgM 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-398972 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MPPED1 (D-2) is recommended for detection of MPPED1 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 MPPED1 siRNA (h): sc-75820, MPPED1 siRNA (m): sc-149540, MPPED1 shRNA Plasmid (h): sc-75820-SH, MPPED1 shRNA Plasmid (m): sc-149540-SH, MPPED1 shRNA (h) Lentiviral Particles: sc-75820-V and MPPED1 shRNA (m) Lentiviral Particles: sc-149540-V.

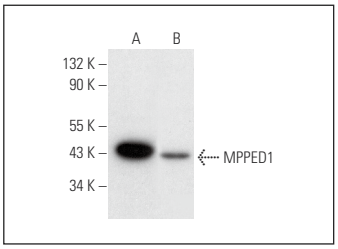
Molecular Weight of MPPED1: 37 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, SK-N-MC cell lysate: sc-2237 or C6 whole cell lysate: sc-364373.

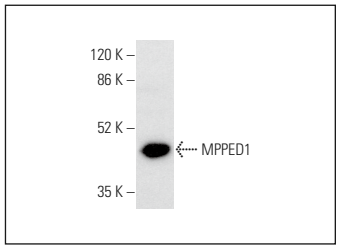
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



MPPED1 (D-2): sc-398972. Western blot analysis of MPPED1 expression in Hep G2 (**A**) and SK-N-MC (**B**) whole cell lysates.



MPPED1 (D-2): sc-398972. Western blot analysis of MPPED1 expression in C6 whole cell lysate.

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.