SANTA CRUZ BIOTECHNOLOGY, INC.

MPP4 (M-104): sc-98321

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Progression of cells from interphase to mitosis involves alterations in cell structures and activities. The transition from G_2 to M phase is induced by M phase-promoting factor (MPF). In M phase, many proteins are phosphorylated directly by MPF or indirectly by kinases activated by MPF. These M phase phosphoproteins (MPPs), also known as MPHOSPHs, permit disassembly of interphase structures and generation of M phase enzymatic activities and structures. MPP4 (membrane protein, palmitoylated 4 (MAGUK p55 subfamily member 4)), also known as DLG6, ALS2CR5, MAGUK p55 subfamily member 4, discs large homolog 6 or amyotrophic lateral sclerosis 2 chromosomal region candidate gene 5 protein, is a 637 amino acid protein and member of the MAGUK family that localizes to cytoplasm and likely plays a role in the development of retinal photoreceptors. MPP4 is highly expressed in retina, and weakly expressed in testis and brain. MPP4 contains one guanylate kinase-like domain, one SH3 domain, one PDZ (DHR) domain and two L27 domains. Due to alternative splicing events, five MPP4 isoforms exist. Studies suggest MPP4 may be responsible for autosomal recessive retinitis pigmentosa 26 (RP26), as the two genes colocalize on human chromosome 2q33.1.

REFERENCES

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2. Stöhr, H. and Weber, B.H. 2001. Cloning and characterization of the human retina-specific gene MPP4, a novel member of the p55 subfamily of MAGUK proteins. Genomics 74: 377-384.
3. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606575. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Conte, I., Lestingi, M., den Hollander, A., Miano, M.G., Alfano, G., Circolo, D., Pugliese, M., Testa, F., Simonelli, F., Rinaldi, E., Baiget, M., Banfi, S. and Ciccodicola, A. 2002. Characterization of MPP4, a gene highly expressed in photoreceptor cells, and mutation analysis in retinitis pigmentosa. Gene 297: 33-38.

CHROMOSOMAL LOCATION

Genetic locus: MPP4 (human) mapping to 2q33.1; Mpp4 (mouse) mapping to 1 C1.3.

SOURCE

MPP4 (M-104) is a rabbit polyclonal antibody raised against amino acids 165-268 mapping within an internal region of MPP4 of mouse origin.

PRODUCT

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

APPLICATIONS

MPP4 (M-104) is recommended for detection of MPP4 of mouse, rat and, to a lesser extent, 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).

MPP4 (M-104) is also recommended for detection of MPP4 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for MPP4 siRNA (h): sc-94843, MPP4 siRNA (m): sc-149536, MPP4 shRNA Plasmid (h): sc-94843-SH, MPP4 shRNA Plasmid (m): sc-149536-SH, MPP4 shRNA (h) Lentiviral Particles: sc-94843-V and MPP4 shRNA (m) Lentiviral Particles: sc-149536-V.

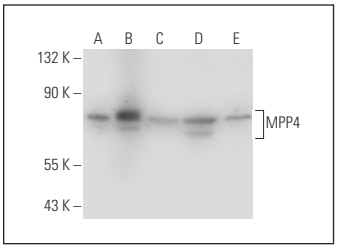
Molecular Weight of MPP4: 72 kDa.

Positive Controls: MPP4 (m): 293T Lysate: sc-121731 or CSMLO whole cell lysate: sc-364369.

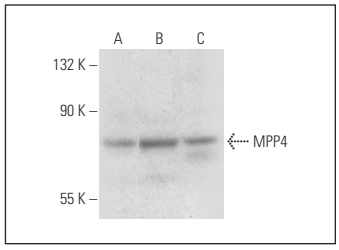
RECOMMENDED SECONDARY REAGENTS

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



MPP4 (M-104): sc-98321. Western blot analysis of MPP4 expression in non-transfected 293T: sc-117752 (**A**), mouse MPP4 transfected 293T: sc-121731 (**B**), MDA-MB-435S (**C**), HeLa (**D**) and HT-1080 (**E**) whole cell lysates.



MPP4 (M-104): sc-98321. Western blot analysis of MPP4 expression in ZR-75-1 (**A**), NCI-H460 (**B**) and CSMLO (**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.

RESEARCH USE

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