

MPZL3 (P-14): sc-168635

BACKGROUND

MPZL3 (myelin protein zero-like 3) is a 235 amino acid single-pass type I membrane protein that regulates homophilic cell-to-cell adhesion. A member of the myelin P0 protein family, MPZL3 contains one Ig-like V-type (immunoglobulin-like) domain and is expressed in brain, heart, liver and skin. The gene encoding MPZL3 maps to human chromosome 11, which comprises approximately 4% of human genomic DNA and is considered a gene and disease association dense chromosome. The chromosome 11 encoded *Atm* gene is important for regulation of cell cycle arrest and apoptosis following double strand DNA breaks. *Atm* mutation leads to the disorder known as ataxia-telangiectasia. The blood disorders Sickle cell anemia and thalassemia are caused by HBB gene mutations, while Wilms' tumors, WAGR syndrome and Denys-Drash syndrome are associated with mutations of the WT1 gene. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11-encoded genes.

REFERENCES

1. Fabiani, J.E., et al. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine Allergy and Immunology Institute. *Allergol. Immunopathol.* 28: 267-271.
2. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
3. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.
4. Cao, T., et al. 2007. Mutation in *Mpzl3*, a novel [corrected] gene encoding a predicted [corrected] adhesion protein, in the rough coat (*rc*) mice with severe skin and hair abnormalities. *J. Invest. Dermatol.* 127: 1375-1386.
5. Siem, G., et al. 2008. Jervell and Lange-Nielsen syndrome in Norwegian children: aspects around cochlear implantation, hearing, and balance. *Ear Hear.* 29: 261-269.
6. Bhuiyan, Z.A., et al. 2008. An intronic mutation leading to incomplete skipping of exon-2 in *KCNQ1* rescues hearing in Jervell and Lange-Nielsen syndrome. *Prog. Biophys. Mol. Biol.* 98: 319-327.

CHROMOSOMAL LOCATION

Genetic locus: MPZL3 (human) mapping to 11q23.3; *Mpzl3* (mouse) mapping to 9 A5.2.

SOURCE

MPZL3 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MPZL3 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.

Blocking peptide available for competition studies, sc-168635 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MPZL3 (P-14) is recommended for detection of MPZL3 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); non cross-reactive with MPZL1 or MPZL2.

MPZL3 (P-14) is also recommended for detection of MPZL3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MPZL3 siRNA (h): sc-96941, MPZL3 siRNA (m): sc-149547, MPZL3 shRNA Plasmid (h): sc-96941-SH, MPZL3 shRNA Plasmid (m): sc-149547-SH, MPZL3 shRNA (h) Lentiviral Particles: sc-96941-V and MPZL3 shRNA (m) Lentiviral Particles: sc-149547-V.

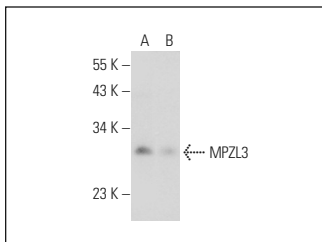
Molecular Weight of MPZL3: 26 kDa.

Positive Controls: mouse brain extract: sc-2253 or human colon extract: sc-363757.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MPZL3 (P-14): sc-168635. Western blot analysis of MPZL3 expression in mouse brain (A) and human colon (B) tissue extracts.

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.