

Mtvr1 (G-14): sc-240718

BACKGROUND

Mtvr1 (mammary tumor virus receptor homolog 1), also known as FAM89B (family with sequence similarity 89, member B), is a 176 amino acid protein that exists as 2 alternatively spliced isoforms. Belonging to the FAM89 family, Mtvr1 is encoded by a gene that 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 Sick 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

- Golovkina, T.V., et al. 1998. A novel membrane protein is a mouse mammary tumor virus receptor. *J. Virol.* 72: 3066-3071.
- Sakuma-Takagi, M., et al. 1999. Novel related cDNAs (C184L, C184M, and C184S) from developing mouse brain encoding two apparently unrelated proteins. *Biochem. Biophys. Res. Commun.* 263: 737-742.
- 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.
- Stewart, A.F. 2002. Identification of human homologues of the mouse mammary tumor virus receptor. *Arch. Virol.* 147: 577-581.
- Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
- Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inher. Metab. Dis.* 30: 654-663.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: FAM89B (human) mapping to 11q13.1; Mtvr2 (mouse) mapping to 19 A.

SOURCE

Mtvr1 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mtvr1 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-240718 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mtvr1 (G-14) is recommended for detection of Mtvr1 of human origin and Mtvr2 of mouse and rat 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).

Mtvr1 (G-14) is also recommended for detection of Mtvr1 in additional species, including canine and bovine.

Suitable for use as control antibody for Mtvr1 siRNA (h): sc-96874, Mtvr2 siRNA (m): sc-149697, Mtvr1 shRNA Plasmid (h): sc-96874-SH, Mtvr2 shRNA Plasmid (m): sc-149697-SH, Mtvr1 shRNA (h) Lentiviral Particles: sc-96874-V and Mtvr2 shRNA (m) Lentiviral Particles: sc-149697-V.

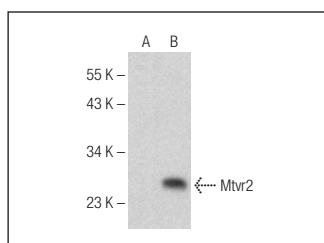
Molecular Weight of Mtvr1 isoforms: 19/18 kDa.

Positive Controls: Mtvr1 (m): 293T Lysate: sc-121854.

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



Mtvr1 (G-14): sc-240718. Western blot analysis of Mtvr2 expression in non-transfected: sc-117752 (A) and mouse Mtvr2 transfected: sc-121854 (B) 293T 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.