

MRGE (S-12): sc-168643

BACKGROUND

MRGE (MAS-related GPR, member E), also known as GPR167 (G-protein coupled receptor 167), is a 311 amino acid multi-pass membrane protein that acts as an orphan receptor and is thought to influence nociceptor function. A member of the G-protein coupled receptor 1 family and MAS subfamily, MRGE is encoded by a gene that maps to human chromosome 11p15.4 and mouse chromosome 7 F5. Chromosome 11 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. 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. Dong, X., et al. 2001. A diverse family of GPCRs expressed in specific subsets of nociceptive sensory neurons. *Cell* 106: 619-632.
3. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the *DHCR7* gene. *Ann. Hum. Genet.* 67: 269-280.
4. Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. *Proc. Natl. Acad. Sci. USA* 100: 4903-4908.
5. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inher. Metab. Dis.* 30: 654-663.
6. 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.
7. 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.
8. Coldren, C.D., et al. 2009. Chromosomal microarray mapping suggests a role for *BSX* and *Neurogranin* in neurocognitive and behavioral defects in the 11q terminal deletion disorder (Jacobsen syndrome). *Neurogenetics* 10: 89-95.
9. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 607232. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: *Mrgpre* (mouse) mapping to 7 F5.

SOURCE

MRGE (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of MRGE 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.

Blocking peptide available for competition studies, sc-168643 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRGE (S-12) is recommended for detection of MRGE of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 MRGE siRNA (m): sc-149570, MRGE shRNA Plasmid (m): sc-149570-SH and MRGE shRNA (m) Lentiviral Particles: sc-149570-V.

Molecular Weight of MRGE: 34 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.