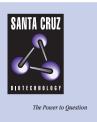
SANTA CRUZ BIOTECHNOLOGY, INC.

MGC4618 (J-25): sc-102021



BACKGROUND

MGC4618, also known as TMEM175 (Transmembrane protein 175), is a 504 amino acid multi-pass membrane protein that is expressed as two isoforms produced by alternative splicing. The gene encoding MGC4618 maps to chromosome 4. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is on chromosome 4. FGFR-3 is also encoded on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease. Chromosome 4 reportedly contains the largest gene deserts (regions of the genome with no protein encoding genes) and has one of the two lowest recombination frequencies of the human chromosomes.

REFERENCES

- Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
- 2. Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75: 25-71.
- Chandler, R.J., et al. 2007. Metabolic phenotype of methylmalonic acidemia in mice and humans: the role of skeletal muscle. BMC Med. Genet. 8: 64
- 4. Cunningham, M.L., et al. 2007. Syndromic craniosynostosis: from history to hydrogen bonds. Orthod. Craniofac. Res. 10: 67-81.
- de Frutos, C.A., et al. 2007. Snail1 is a transcriptional effector of FGFR3 signaling during chondrogenesis and achondroplasias. Dev. Cell 13: 872-883.
- 7. Ruiz-Perez, V.L., et al. 2007. Evc is a positive mediator of lhh-regulated bone growth that localises at the base of chondrocyte cilia. Development 134: 2903-2912.
- 8. Stack, E.C., et al. 2007. Neuroprotective effects of synaptic modulation in Huntington's disease R6/2 mice. J. Neurosci. 27: 12908-12915.
- Versteegh, F.G., et al. 2007. EvC Working Party. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. Am. J. Med. Genet. A 143: 2113-2121.
- Doherty, E.S., et al. 2007. Muenke syndrome (FGFR3-related craniosynostosis): Expansion of the phenotype and review of the literature. Am. J. Med. Genet. A 143: 3204-3215.

CHROMOSOMAL LOCATION

Genetic locus: TMEM175 (human) mapping to 4p16.3; Tmem175 (mouse) mapping to 5 F.

STORAGE

Store at 4° C, **D0 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.

SOURCE

MGC4618 (J-25) is a purified rabbit polyclonal antibody raised against MGC4618 of human origin.

PRODUCT

Each vial contains 100 μ g lgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

MGC4618 (J-25) is recommended for detection of MGC4618 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MGC4618 siRNA (h): sc-88930, TMEM175 siRNA (m): sc-154413, MGC4618 shRNA Plasmid (h): sc-88930-SH, TMEM175 shRNA Plasmid (m): sc-154413-SH, MGC4618 shRNA (h) Lentiviral Particles: sc-88930-V and TMEM175 shRNA (m) Lentiviral Particles: sc-154413-V.

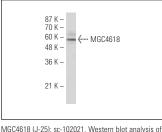
Molecular Weight of MGC4618: 56 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

DATA



MGC4618 (J-25). SC-102021. Western blot analysis MGC4618 expression in Hep G2 whole cell lysate.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.