

GRAMD4 (T-18): sc-86416

BACKGROUND

The gene encoding GRAMD4 (GRAM domain-containing protein 4) maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. GRAMD4, also designated death-inducing protein (DIP), is a 578 amino acid mitochondrial membrane protein that acts as an essential mediator of the p53-independent E2F-1 death pathway, which is frequently found to be deregulated in several types of cancers. Overexpression of GRAMD4 results in a strong apoptotic response involving caspase-3 activation and cleavage of poly(ADP-ribose)-polymerase. GRAMD4 is expressed in lung and in primary lung squamous cell carcinoma (LSCC) and shows up-regulation in mitochondria by E2F-1 after addition of 4-hydroxytamoxifen. This evidence suggests that GRAMD4 may be a potential target for cancer therapies. There are two isoforms of GRAMD4 which are produced as a result of alternative splicing events.

REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. *Chromosome 22. Genet. Test.* 2: 89-97.
2. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. *Am. J. Med. Genet.* 88: 276-278.
3. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. *J. Med. Genet.* 41: 529-534.
4. Stanelle, J., et al. 2005. A novel mitochondrial protein DIP mediates E2F1-induced apoptosis independently of p53. *Cell Death Differ.* 12: 347-357.
5. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. *J. Hum. Genet.* 51: 1037-1045.
6. Paylor, R., et al. 2006. TBX1 haploinsufficiency is linked to behavioral disorders in mice and humans: implications for 22q11 deletion syndrome. *Proc. Natl. Acad. Sci. USA* 103: 7729-7734.
7. Zheng, X., et al. 2006. BCR and its mutants, the reciprocal t(9;22)-associated ABL/BCR fusion proteins, differentially regulate the cytoskeleton and cell motility. *BMC Cancer* 6: 262.
8. Ahronowitz, I., et al. 2007. Mutational spectrum of the NF2 gene: a meta-analysis of 12 years of research and diagnostic laboratory findings. *Hum. Mutat.* 28: 1-12.
9. Hay, B.N. 2007. Deletion 22q11: spectrum of associated disorders. *Semin. Pediatr. Neurol.* 14: 136-139.

CHROMOSOMAL LOCATION

Genetic locus: GRAMD4 (human) mapping to 22q13.31.

SOURCE

GRAMD4 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GRAMD4 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-86416 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GRAMD4 (T-18) is recommended for detection of GRAMD4 of human 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 GRAMD4 siRNA (h): sc-77152, GRAMD4 shRNA Plasmid (h): sc-77152-SH and GRAMD4 shRNA (h) Lentiviral Particles: sc-77152-V.

Molecular Weight of GRAMD4 isoforms: 66/11 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.

RESEARCH USE

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

PROTOCOLS

SEE OUR WEB SITE AT WWW.SCBT.COM OR OUR


 MONOS
Satisfaction
Guaranteed

Try **GRAMD4 (C-8): sc-515128**, our highly recommended monoclonal alternative to GRAMD4 (T-18).

CATALOG FOR DETAILED PROTOCOLS

and support products.