

PREI4 (G-19): sc-85838

BACKGROUND

PREI4, also known as GPCPD1 (glycerophosphocholine phosphodiesterase GDE1 homolog), is a 672 amino acid protein that belongs to the glycerophosphoryl diester phosphodiesterase family. The PREI4 protein contains one CBM20 (carbohydrate binding type-20) domain and one GDPD domain. PREI4 may be involved in the negative regulation of skeletal muscle differentiation, independently of its glycerophosphocholine phosphodiesterase activity. The PREI4 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *A.thaliana* and rice, and maps to human chromosome 20p12.3. Representing about 2% of human DNA, chromosome 20 consists of approximately 63 million bases and 600 genes. Chromosome 20 contains a region with numerous genes expressed in the epididymis which are thought important for seminal production and some viewed as potential targets for male contraception. Amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome are also associated with chromosome 20.

REFERENCES

- Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
- Deloukas, P., et al. 2001. The DNA sequence and comparative analysis of human chromosome 20. Nature 414: 865-871.
- Ville, D., 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. Epilepsia 47: 543-549.
- Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. Asian J. Androl. 9: 540-544.
- Okazaki, Y., et al. 2010. A novel glycerophosphodiester phosphodiesterase, GDE5, controls skeletal muscle development via a non-enzymatic mechanism. J. Biol. Chem. 285: 27652-27663.
- Bakken, T.E., et al. 2012. Association of common genetic variants in GPCPD1 with scaling of visual cortical surface area in humans. Proc. Natl. Acad. Sci. USA 109: 3985-3990.

CHROMOSOMAL LOCATION

Genetic locus: GPCPD1 (human) mapping to 20p12.3; Gpcpd1 (mouse) mapping to 2 F2.

SOURCE

PREI4 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PREI4 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.

PROTOCOLS

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

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-85838 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PREI4 (G-19) is recommended for detection of PREI4 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).

PREI4 (G-19) is also recommended for detection of PREI4 in additional species, including equine, canine, bovine and porcine.

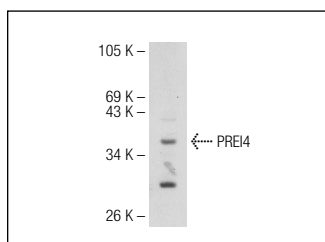
Suitable for use as control antibody for PREI4 siRNA (h): sc-76241, PREI4 siRNA (m): sc-152457, PREI4 shRNA Plasmid (h): sc-76241-SH, PREI4 shRNA Plasmid (m): sc-152457-SH, PREI4 shRNA (h) Lentiviral Particles: sc-76241-V and PREI4 shRNA (m) Lentiviral Particles: sc-152457-V.

Molecular Weight of PREI4: 76 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) 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



PREI4 (G-19): sc-85838. Western blot analysis of PREI4 expression in LADMAC whole cell lysate.

RESEARCH USE

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