PGPEP1L (C-15): sc-248242

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

PGPEP1L (pyroglutamyl-peptidase I-like) is a 196 amino acid protein that participates in cysteine-type peptidase activity and belongs to the peptidase C15 family. Conserved in chimpanzee, bovine, mouse and chicken, PGPEP1L is encoded by a gene that maps to human chromosome 15q26.3. Chromosome 15 makes up approximately 3% of the human genome and contains 106 million base pairs encoding more than 700 genes. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes on chromosome 15q. In the case of Angelman syndrome, this loss is due to inactivity of the maternal encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In Prader-Willi syndrome, a partial or complete deletion from the paternal copy of chromosome 15 occurs. Tay-Sachs disease, a lethal disorder associated with mutations of the HEXA gene, and Marfan syndrome are also associated with chromosome 15.

REFERENCES

1. Zody, M.C., Garber, M., Sharpe, T., Young, S.K., Rowen, L., O'Neill, K., Whittaker, C.A., Kamal, M., Chang, J.L., Cuomo, C.A., Dewar, K., FitzGerald, M.G., Kodira, C.D., Madan, A., Qin, S., Yang, X., Abbasi, N., Abouelleil, A., Arachchi, H.M., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. Nature 440: 671-675.

2. Cachón-González, M.B., Wang, S.Z., Lynch, A., Ziegler, R., Cheng, S.H. and Cox, T.M. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. Proc. Natl. Acad. Sci. USA 103: 10373-10378.

3. Diene, G., Postel-Vinay, A., Pinto, G., Polak, M. and Tauber, M. 2007. The Prader-Willi syndrome. Ann. Endocrinol. 68: 129-137.

4. Lalande, M. and Calciano, M.A. 2007. Molecular epigenetics of Angelman syndrome. Cell. Mol. Life Sci. 64: 947-960.

5. Makoff, A.J. and Flomen, R.H. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. Genome Biol. 8: R114.

6. Kim, D.K., Cho, E.B., Moon, M.J., Park, S., Hwang, J.I., Kah, O., Sower, S.A., Vaudry, H. and Seong, J.Y. 2010. Revisiting the evolution of gonadotropin-releasing hormones and their receptors in vertebrates: Secrets hidden in genomes. Gen. Comp. Endocrinol. 170: 68-78.

CHROMOSOMAL LOCATION

Genetic locus: PGPEP1L (human) mapping to 15q26.3.

SOURCE

PGPEP1L (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PGPEP1L 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-248242 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PGPEP1L (C-15) is recommended for detection of PGPEP1L 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).

Molecular Weight of PGPEP1L: 22 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.