

DPEP1 (N-14): sc-109260

BACKGROUND

DPEP1 (dipeptidase 1), also known as MDP, RDP or MBD1, is a 411 amino acid renal protein that localizes to the apical cell membrane and belongs to the peptidase M19 family. Existing as a disulfide-linked homodimer, DPEP1 uses zinc as a cofactor to catalyze the hydrolysis of various dipeptides and, via its catalytic activity, plays a role in glutathione and leukotriene metabolism. DPEP1 is functionally inhibited by L-penicillamine and is subject to post-translational N-glycosylation. The gene encoding DPEP1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Campbell, B.J., Forrester, L.J., Zahler, W.L. and Burks, M. 1984. β -lactamase activity of purified and partially characterized human renal dipeptidase. *J. Biol. Chem.* 259: 14586-14590.
2. Adachi, H., Kubota, I., Okamura, N., Iwata, H., Tsujimoto, M., Nakazato, H., Nishihara, T. and Noguchi, T. 1989. Purification and characterization of human microsomal dipeptidase. *J. Biochem.* 105: 957-961.
3. Hooper, N.M., Keen, J.N. and Turner, A.J. 1990. Characterization of the glycosyl-phosphatidylinositol-anchored human renal dipeptidase reveals that it is more extensively glycosylated than the pig enzyme. *Biochem. J.* 265: 429-433.
4. Adachi, H., Tawaragi, Y., Inuzuka, C., Kubota, I., Tsujimoto, M., Nishihara, T. and Nakazato, H. 1990. Primary structure of human microsomal dipeptidase deduced from molecular cloning. *J. Biol. Chem.* 265: 3992-3995.
5. Adachi, H., Katayama, T., Inuzuka, C., Oikawa, S., Tsujimoto, M. and Nakazato, H. 1990. Identification of membrane anchoring site of human renal dipeptidase and construction and expression of a cDNA for its secretory form. *J. Biol. Chem.* 265: 15341-15345.
6. Austruy, E., Jeanpierre, C., Antignac, C., Whitmore, S.A., Van Cong, N., Bernheim, A., Callen, D.F. and Junien, C. 1993. Physical and genetic mapping of the dipeptidase gene DPEP1 to 16q24.3. *Genomics* 15: 684-687.

CHROMOSOMAL LOCATION

Genetic locus: DPEP1 (human) mapping to 16q24.3.

SOURCE

DPEP1 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DPEP1 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109260 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DPEP1 (N-14) is recommended for detection of DPEP1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

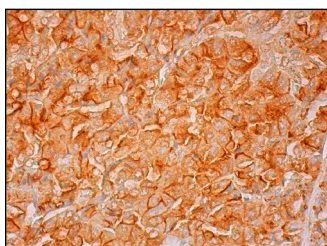
Suitable for use as control antibody for DPEP1 siRNA (h): sc-93251, DPEP1 shRNA Plasmid (h): sc-93251-SH and DPEP1 shRNA (h) Lentiviral Particles: sc-93251-V.

Molecular Weight of DPEP1 monomer: 42 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



DPEP1 (N-14): sc-109260. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and membrane staining of exocrine glandular cells.

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.