

DPEP2 (A-13): sc-164211

BACKGROUND

DPEP2 (dipeptidase 2), also known as MBD2, is a 486 amino acid protein that belongs to the peptidase M19 family and is thought to function as a metalloprotease. A membrane protein that exists as a disulfide-linked homodimer, DPEP2 binds zinc as a cofactor and is inhibited by L-penicillamine. DPEP2 undergoes alternative splicing events to produce two isoforms, which are encoded by a gene that maps to human chromosome 16q22.1. Chromosome 16 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

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- Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. *Am. J. Hum. Genet.* 52: 249-254.
- Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
- Habib, G.M., et al. 2003. Identification of two additional members of the membrane-bound dipeptidase family. *FASEB J.* 17: 1313-1315.
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- Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13 Spec. No. 1: R161-R168.
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CHROMOSOMAL LOCATION

Genetic locus: Dpep2 (mouse) mapping to 8 D3.

SOURCE

DPEP2 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DPEP2 of mouse 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-164211 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DPEP2 (A-13) is recommended for detection of DPEP2 of mouse and rat 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); non cross-reactive with DPEP1 or DPEP3.

Suitable for use as control antibody for DPEP2 siRNA (m): sc-143153, DPEP2 shRNA Plasmid (m): sc-143153-SH and DPEP2 shRNA (m) Lentiviral Particles: sc-143153-V.

Molecular Weight of DPEP2 isoform 1: 53 kDa.

Molecular Weight of DPEP2 isoform 2: 44 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 catalog for detailed protocols and support products.