SANTA CRUZ BIOTECHNOLOGY, INC.

DPEP3 (F-3): sc-515350

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DPEP3 (dipeptidase 3), also known as MBD3 (membrane-bound dipeptidase 3), is a 488 amino acid protein that belongs to the peptidase M19 family and is thought to function as a metalloprotease. A membrane protein expressed in testis, DPEP3 exists as a disulfide-linked homodimer and may be involved in meiosis. DPEP3 binds zinc as a cofactor, is inhibited by L-penicillamine and is 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

1. 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.
2. Kuhlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. Neurology 58: 1273-1276.
3. Habib, G.M., et al. 2003. Identification of two additional members of the membrane-bound dipeptidase family. FASEB J. 17: 1313-1315.
4. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. Curr. Gastroenterol. Rep. 6: 467-473.
5. Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. Hum. Mol. Genet. 13: R161-R168.
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CHROMOSOMAL LOCATION

Genetic locus: DPEP3 (human) mapping to 16q22.1; Dpep3 (mouse) mapping to 8 D3.

SOURCE

DPEP3 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 46-67 near the N-terminus of DPEP3 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515350 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

DPEP3 (F-3) is recommended for detection of DPEP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for DPEP3 siRNA (h): sc-93340, DPEP3 siRNA (m): sc-143154, DPEP3 shRNA Plasmid (h): sc-93340-SH, DPEP3 shRNA Plasmid (m): sc-143154-SH, DPEP3 shRNA (h) Lentiviral Particles: sc-93340-V and DPEP3 shRNA (m) Lentiviral Particles: sc-143154-V.

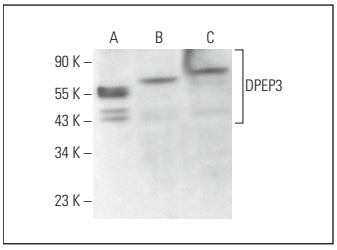
Molecular Weight of DPEP3: 54 kDa.

Positive Controls: F9 cell lysate: sc-2245, NCI-H1299 whole cell lysate: sc-364234 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DPEP3 (F-3): sc-515350. Western blot analysis of DPEP3 expression in NCI-H1299 (**A**), K-562 (**B**) and F9 (**C**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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