

PDILT (H-5): sc-393529

BACKGROUND

PDILT (protein disulfide-isomerase-like protein of the testis), also known as PDIA7 (protein disulfide isomerase family A, member 7), is a 584 amino acid protein of the endoplasmic reticulum that is thought to function as a redox-inactive chaperone during spermatogenesis. Expressed specifically in testis, PDILT exists as a homodimer that undergoes post-translational N-glycosylation and belongs to the protein disulfide isomerase family. PDILT associates with Calmegin and Ero1-L, and is encoded by a gene that maps to human chromosome 16p12.3. 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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- 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.
- Kuhlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
- Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.
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- van Lith, M., et al. 2005. PDILT, a divergent testis-specific protein disulfide isomerase with a non-classical SXXC motif that engages in disulfide-dependent interactions in the endoplasmic reticulum. *J. Biol. Chem.* 280: 1376-1383.
- van Lith, M., et al. 2007. A developmentally regulated chaperone complex for the endoplasmic reticulum of male haploid germ cells. *Mol. Biol. Cell* 18: 2795-2804.

CHROMOSOMAL LOCATION

Genetic locus: Pdilt (mouse) mapping to 7 F2.

SOURCE

PDILT (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 449-474 within an internal region of PDILT of mouse 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 µg IgG₃ 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-393529 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PDILT (H-5) is recommended for detection of PDILT of mouse and rat 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 PDILT siRNA (m): sc-152138, PDILT shRNA Plasmid (m): sc-152138-SH and PDILT shRNA (m) Lentiviral Particles: sc-152138-V.

Molecular Weight of PDILT: 76 kDa.

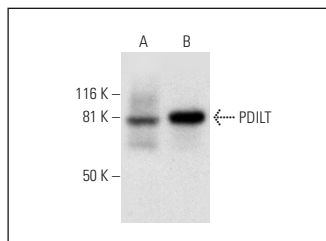
Positive Controls: mouse testis extract: sc-2405 or rat testis extract: sc-2400.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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



PDILT (H-5): sc-393529. Western blot analysis of PDILT expression in mouse testis (A) and rat testis (B) tissue extracts.

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.