

PEPD (h4): 293T Lysate: sc-158843

BACKGROUND

PEPD (peptidase D), also referred to as prolidase, is a cytosolic dipeptidase that belongs to the peptidase M24B family. PEPD hydrolyzes di- and tripeptides with proline or hydroxyproline at the C-terminus. PEPD functions as a homodimer and may play an important role in collagen metabolism as well as in the recycling of proline in various cells and tissues. Defects in the gene encoding PEPD are the primary cause of prolidase deficiency in humans. Prolidase deficiency is an autosomal recessive disorder associated with iminodipeptiduria and is characterized by skin ulcers, mental retardation, recurrent infections and A-typical facies. Mutations in the gene encoding PEPD may also be the cause of systemic lupus erythematosus and necrosis-like cell death in fibroblasts. Additionally, there is thought to be a tight linkage between the polymorphisms of prolidase and the myotonic dystrophy trait.

REFERENCES

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3. Tanoue, A., et al. 1990. Structural organization of the gene for human prolidase (peptidase D) and demonstration of a partial gene deletion in a patient with prolidase deficiency. *J. Biol. Chem.* 265: 11306-11311.
4. Endo, F., et al. 1991. Molecular basis of prolidase (peptidase D) deficiency. *Mol. Biol. Med.* 8: 117-127.
5. Henrich, B., et al. 1992. The promoter region of the *Escherichia coli* PEPD gene: deletion analysis and control by phosphate concentration. *Mol. Genet.* 232: 117-125.
6. Ledoux, P., et al. 1994. Four novel PEPD alleles causing prolidase deficiency. *Am. J. Hum. Genet.* 54: 1014-1021.
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8. Forlino, A., et al. 2002. Mutation analysis of five new patients affected by prolidase deficiency: the lack of enzyme activity causes necrosis-like cell death in cultured fibroblasts. *Hum. Genet.* 111: 314-322.
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CHROMOSOMAL LOCATION

Genetic locus: PEPD (human) mapping to 19q13.11.

PRODUCT

PEPD (h4): 293T Lysate represents a lysate of human PEPD transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

PEPD (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive PEPD antibodies. Recommended use: 10-20 µl per lane.

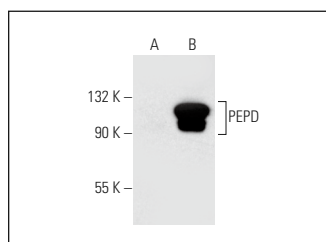
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PEPD (47-Q): sc-100708 is recommended as a positive control antibody for Western Blot analysis of enhanced human PEPD expression in PEPD transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



PEPD (47-Q): sc-100708. Western blot analysis of PEPD expression in non-transfected: sc-117752 (A) and human PEPD transfected: sc-158843 (B) 293T 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.