SANTA CRUZ BIOTECHNOLOGY, INC.

PET112L (47.1): sc-100970



BACKGROUND

PET112L is the human homolog of the *S. cerevisiae* COX assembly protein PET112, a protein that is believed to play an important role in the translation of mitochondrial genes. PET112L, also known as HSPC199 or Glu-ADT subunit B (glutamyl-tRNA(Gln) amidotransferase subunit B), is a 557 amino acid protein belonging to the gatB/gatE family of proteins (GatB subfamily) and is believed to play a role in energy metabolism. Localizing to mitochondria, PET112L is expressed in tissues such as heart and muscle, which exhibit high rates of oxidative phosphorylation. The gene encoding PET112L is overexpressed in recurrent ependymoma.

REFERENCES

- Mulero, J.J., Rosenthal, J.K. and Fox, T.D. 1994. PET112, a Saccharomyces cerevisiae nuclear gene required to maintain Rho⁺ mitochondrial DNA. Curr. Genet. 25: 299-304.
- 2. Obermaier, B., Gassenhuber, J., Piravandi, E. and Domdey, H. 1995. Sequence analysis of a 78.6 kb segment of the left end of *Saccharomyces cerevisiae* chromosome II. Yeast 11: 1103-1112.
- Kim, S.I., Stange-Thomann, N., Martins, O., Hong, K.W., Söll, D. and Fox, T.D. 1997. A nuclear genetic lesion affecting *Saccharomyces cerevisiae* mitochondrial translation is complemented by a homologous *Bacillus* gene. J. Bacteriol. 179: 5625-5627.
- Petruzzella, V., Tiranti, V., Fernandez, P., Ianna, P., Carrozzo, R. and Zeviani, M. 1998. Identification and characterization of human cDNAs specific to BCS1, PET112, SC01, COX15, and COX11, five genes involved in the formation and function of the mitochondrial respiratory chain. Genomics 54: 494-504.
- 5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603645. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Yamamoto, T., Myokai, F., Nishimura, F., Ohira, T., Shiomi, N., Yamashiro, K., Arai, H., Murayama, Y. and Takashiba, S. 2003. Gene profiling in human periodontal ligament fibroblasts by subtractive hybridization. J. Dent. Res. 82: 641-645.
- Lallier, T.E., Spencer, A. and Fowler, M.M. 2005. Transcript profiling of periodontal fibroblasts and osteoblasts. J. Periodontol. 76: 1044-1055.

CHROMOSOMAL LOCATION

Genetic locus: PET112L (human) mapping to 4q31.3.

SOURCE

PET112L (47.1) is a mouse monoclonal antibody raised against recombinant PET112L of human origin.

PRODUCT

Each vial contains 100 μg IgG_{2a} kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PET112L (47.1) is recommended for detection of PET112L of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PET112L siRNA (h): sc-76108, PET112L shRNA Plasmid (h): sc-76108-SH and PET112L shRNA (h) Lentiviral Particles: sc-76108-V.

Molecular Weight of PET112L: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

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

DATA





PET112L expression in HeLa whole cell lysate

PET112L (47.1): sc-100970. Western blot analysis of PET112L expression in Hep G2 (**A**), NCI-H460 (**B**), Jurkat (**C**) and K-562 (**D**) whole cell lysates.

STORAGE

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

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.