

PRPSAP2 (m): 293T Lysate: sc-125860

BACKGROUND

Phosphoribosylpyrophosphate (PRPP) is an essential substrate and critical control factor for the synthesis of purine and pyrimidine nucleotides, histidine, tryptophan and NAD. The formation of phosphoribosylpyrophosphate from ATP and ribose-5-phosphate is catalyzed by the enzyme phosphoribosylpyrophosphate synthetase (PRS), which exists as a complex with two catalytic subunits, PRPS1 and PRPS2, and two associated subunits, PRPSAP1 and PRPSAP2. PRPSAP1 (phosphoribosyl pyrophosphate synthetase-associated protein 1), also known as PAP39, is a 356 amino acid ubiquitously expressed protein belonging to the ribose-phosphate pyrophosphokinase family. PRPSAP1 may play a regulatory role in 5-phosphoribose 1-diphosphate synthesis and is encoded by a gene mapping to human chromosome 17q25.1. PRPSAP2 (phosphoribosyl pyrophosphate synthetase-associated protein 2), also known as PAP41, is a 369 amino acid protein that is ubiquitously expressed and interacts with PRPS1 and PRPS2.

REFERENCES

1. Avdienko, I.D., Khokhlova, T.A. and Pekhov, A.P. 1983. Range of the transmissivity of the genetic transfer factors pAP38, pAP39, pAP41 and pAP42. *Biull. Eksp. Biol. Med.* 95: 76-77.
2. Tatibana, M. 1996. Mammalian phosphoribosylpyrophosphate synthetase. *Nippon Rinsho* 54: 3195-3201.
3. Fujimori, S. 1996. PRPP synthetase superactivity. *Nippon Rinsho* 54: 3309-3314.
4. Sonoda, T., Ishizuka, T., Kita, K., Ishijima, S. and Tatibana, M. 1997. Cloning and sequencing of rat cDNA for the 41-kDa phosphoribosylpyrophosphate synthetase-associated protein has a high homology to the catalytic subunits and the 39-kDa associated protein. *Biochim. Biophys. Acta* 1350: 6-10.
5. Katashima, R., Iwahana, H., Fujimura, M., Yamaoka, T., Ishizuka, T., Tatibana, M. and Itakura, M. 1998. Molecular cloning of a human cDNA for the 41-kDa phosphoribosylpyrophosphate synthetase-associated protein. *Biochim. Biophys. Acta* 1396: 245-250.
6. Katashima, R., Iwahana, H., Fujimura, M., Yamaoka, T. and Itakura, M. 1998. Assignment of the human phosphoribosylpyrophosphate synthetase-associated protein 41 gene (PRPSAP2) to 17p11.2-p12. *Genomics* 54: 180-181.
7. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603762. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Iizasa, T. 2008. Increased activity of PRPP synthetase. *Nippon Rinsho* 66: 694-698.
9. de Brouwer, A.P., van Bokhoven, H., Nabuurs, S.B., Arts, W.F., Christodoulou, J. and Duley, J. 2010. PRPS1 mutations: four distinct syndromes and potential treatment. *Am. J. Hum. Genet.* 86: 506-518.

CHROMOSOMAL LOCATION

Genetic locus: Prpsap2 (mouse) mapping to 11 B2.

RESEARCH USE

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

PRODUCT

PRPSAP2 (m): 293T Lysate represents a lysate of mouse PRPSAP2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PRPSAP2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PRPSAP2 antibodies. Recommended use: 10-20 µl per lane.

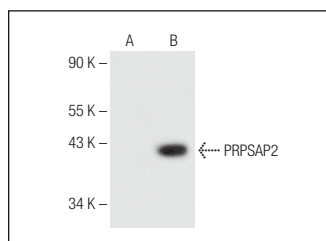
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PRPSAP2 (A-1): sc-376025 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PRPSAP2 expression in PRPSAP2 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



PRPSAP2 (A-1): sc-376025. Western blot analysis of PRPSAP2 expression in non-transfected: sc-117752 (A) and mouse PRPSAP2 transfected: sc-125860 (B) 293T whole cell lysates.

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.

PROTOCOLS

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