

PROSC (h): 293T Lysate: sc-177782

BACKGROUND

PROSC (proline synthetase co-transcribed bacterial homolog protein) is a 275 amino acid ubiquitously expressed enzyme that is highly conserved from bacteria to mammals. The gene encoding PROSC is cotranscribed with proline synthetase. PROSC requires the cofactor pyridoxal phosphate, the active form of vitamin B6 that acts in all transamination reactions. The PROSC gene maps to human chromosome 8, which is made up of nearly 146 million bases and encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and are typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder. Chromosome 8 is also associated with Pfeiffer syndrome, congenital hypothyroidism and Waardenburg syndrome.

REFERENCES

1. Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
2. Ikegawa, S., Isomura, M., Koshizuka, Y. and Nakamura, Y. 1999. Cloning and characterization of human and mouse PROSC (proline synthetase co-transcribed) genes. *J. Hum. Genet.* 44: 337-342.
3. Kashino, G., Kodama, S., Suzuki, K., Oshimura, M. and Watanabe, M. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. *Biochem. Biophys. Res. Commun.* 289: 111-115.
4. Wiemann, S., Weil, B., Wellenreuther, R., Gassenhuber, J., Glassl, S., Ansorge, W., Böcher, M., Blöcker, H., Bauersachs, S., Blum, H., Lauber, J., Dusterhöft, A., Beyer, A., Köhrer, K., Strack, N., Mewes, H.W., Ottenwälder, B., Obermaier, B., Tampe, J., Heubner, D., Wambutt, R., Korn, B., Klein, M., et al. 2001. Toward a catalog of human genes and proteins: sequencing and analysis of 500 novel complete protein coding human cDNAs. *Genome Res.* 11: 422-435.
5. Selicorni, A., Gueneri, S., Ratti, A. and Pizzuti, A. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. *Hum. Genet.* 110: 64-67.
6. Percudani, R. and Peracchi, A. 2003. A genomic overview of pyridoxal-phosphate-dependent enzymes. *EMBO Rep.* 4: 850-854.
7. Eliot, A.C. and Kirsch, J.F. 2004. Pyridoxal phosphate enzymes: mechanistic, structural, and evolutionary considerations. *Annu. Rev. Biochem.* 73: 383-415.
8. Nusbaum, C., Mikkelsen, T.S., Zody, M.C., Asakawa, S., Taudien, S., Garber, M., Kodira, C.D., Schueler, M.G., Shimizu, A., Whittaker, C.A., Chang, J.L., Cuomo, C.A., Dewar, K., FitzGerald, M.G., Yang, X., Allen, N.R., Anderson, S., Asakawa, T., Blechschmidt, K., Bloom, T., Borowsky, M.L., Butler, J., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.

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.

CHROMOSOMAL LOCATION

Genetic locus: PROSC (human) mapping to 8p11.23.

PRODUCT

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

APPLICATIONS

PROSC (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PROSC 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.

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.