

PROSC (A-5): sc-377107

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., et al. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
2. Ikegawa, S., et al. 1999. Cloning and characterization of human and mouse PROSC (proline synthetase co-transcribed) genes. *J. Hum. Genet.* 44: 337-342.
3. Kashino, G., et al. 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., 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., et al. 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., et al. 2004. Pyridoxal phosphate enzymes: mechanistic, structural, and evolutionary considerations. *Annu. Rev. Biochem.* 73: 383-415.
8. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.

CHROMOSOMAL LOCATION

Genetic locus: PROSC (human) mapping to 8p11.23; Prosc (mouse) mapping to 8 A2.

SOURCE

PROSC (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 45-79 within an internal region of PROSC of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PROSC (A-5) is recommended for detection of PROSC of mouse, rat and human 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 PROSC siRNA (h): sc-77811, PROSC siRNA (m): sc-152482, PROSC shRNA Plasmid (h): sc-77811-SH, PROSC shRNA Plasmid (m): sc-152482-SH, PROSC shRNA (h) Lentiviral Particles: sc-77811-V and PROSC shRNA (m) Lentiviral Particles: sc-152482-V.

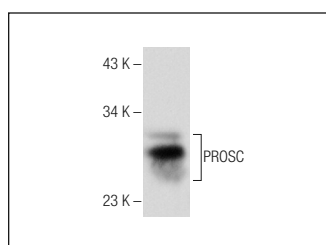
Molecular Weight of PROSC: 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or Ramos cell lysate: sc-2216.

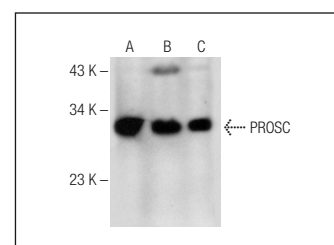
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PROSC (A-5): sc-377107. Western blot analysis of PROSC expression in Hep G2 whole cell lysate.



PROSC (A-5): sc-377107. Western blot analysis of PROSC expression in Jurkat (A), K-562 (B) and Ramos (C) 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 or our catalog for detailed protocols and support products.