

PRKY (S-23): sc-130850

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. PRKY (protein kinase, Y-linked) and PRKX (protein kinase, X-linked) are members of the Ser/Thr protein kinase family, both of which belong to the subfamily of cAMP-dependent kinases. Encoded by a gene that is located near the pseudoautosomal region on chromosome Y, PRKY contains one protein kinase domain through which it catalyzes the ATP-dependent phosphorylation of target proteins. Functioning in a similar manner to PRXY, PRKX contains one protein kinase domain and is essential for macrophage differentiation and renal epithelial cell migration. Defects in the genes encoding PRKY and PRXX are associated with sex reversal disorder, namely XX in males and XY in females.

REFERENCES

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2. Schiebel, K., et al. 1997. Abnormal XY interchange between a novel isolated protein kinase gene, PRKY and its homologue, PRKX, accounts for one third of all (Y+)XX males and (Y-)XY females. *Hum. Mol. Genet.* 6: 1985-1989.
3. McElreavey, K. and Fellous, M. 1999. Sex determination and the Y chromosome. *Am. J. Med. Genet.* 89: 176-185.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300083. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Su, M.T., et al. 2006. Presence of TSPY transcript and absence of transcripts of other Y chromosomal genes in a case of microscopic gonadoblastoma. *Gynecol. Oncol.* 103: 357-360.
6. Jobling, M.A., et al. 2007. Structural variation on the short arm of the human Y chromosome: recurrent multigene deletions encompassing Amelogenin Y. *Hum. Mol. Genet.* 16: 307-316.
7. Murphy, K.M., et al. 2007. Constitutional duplication of a region of chromosome Yp encoding AMELY, PRKY and TBL1Y: implications for sex chromosome analysis and bone marrow engraftment analysis. *J. Mol. Diagn.* 9: 408-413.
8. Li, X., et al. 2008. Protein kinase X (PRKX) can rescue the effects of polycystic kidney disease 1 gene (PKD1) deficiency. *Biochim. Biophys. Acta* 1782: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: PRKY (human) mapping to Yp11.2.

STORAGE

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

SOURCE

PRKY (S-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PRKY of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PRKY (S-23) is recommended for detection of PRKY of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 PRKY siRNA (h): sc-62858, PRKY shRNA Plasmid (h): sc-62858-SH and PRKY shRNA (h) Lentiviral Particles: sc-62858-V.

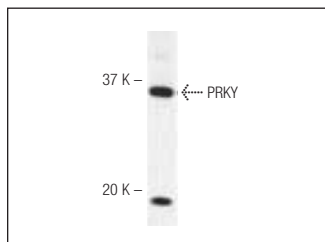
Molecular Weight of PRKY: 32 kDa.

Positive Controls: A-375 cell lysate: sc-3811.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



PRKY (S-23): sc-130850. Western blot analysis of PRKY expression in A-375 whole cell lysate.

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.