

# PROCA1 (S-14): sc-169036

## BACKGROUND

PROCA1 (protein interacting with cyclin A1), also known as proline-rich cyclin A1-interacting protein, is a 364 amino acid protein that belongs to the PROCA1 family and exists as 2 alternatively spliced isoforms. Conserved in canine, bovine, mouse and rat, PROCA1 participates in calcium ion binding and phospholipase A2 activity. The gene that encodes PROCA1 maps to human chromosome 17q11.2. Chromosome 17 makes up over 2.5% of the human genome, with approximately 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. BRCA1 is recognized as a genetic determinant of early onset breast cancer. Chromosome 17 is also linked to neurofibromatosis, dysregulated Schwann cell growth, Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease.

## REFERENCES

1. Welsch, M.J., et al. 2005. Birt-Hogg-Dubé syndrome. *Int. J. Dermatol.* 44: 668-673.
2. Isensee, J., et al. 2007. Sexually dimorphic gene expression in mammalian somatic tissue. *Genet. Med.* 4 Suppl. B: S75-S95.
3. Al-Dirbashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. *J. Inher. Metab. Dis.* 30: 612.
4. Tai, Y.C., et al. 2007. Breast cancer risk among male BRCA1 and BRCA2 mutation carriers. *J. Natl. Cancer Inst.* 99: 1811-1814.
5. Farrell, C.J., et al. 2007. Genetic causes of brain tumors: neurofibromatosis, tuberous sclerosis, von Hippel-Lindau, and other syndromes. *Neurol. Clin.* 25: 925-46, viii.
6. Yan, J., et al. 2007. BLIMP1 regulates cell growth through repression of p53 transcription. *Proc. Natl. Acad. Sci. USA* 104: 1841-1846.
7. Murakami, N., et al. 2008. Novel deletion mutation in GFAP gene in an infantile form of Alexander disease. *Pediatr. Neurol.* 38: 50-52.
8. Domae, S., et al. 2009. Identification of CCDC62-2 as a novel cancer/testis antigen and its immunogenicity. *Int. J. Cancer* 124: 2347-2352.
9. Wanna, W., et al. 2010. Identification of a functional splice variant of 14-3-3E1 in rainbow trout. *Mar. Biotechnol.* 12: 70-80.

## CHROMOSOMAL LOCATION

Genetic locus: PROCA1 (human) mapping to 17q11.2.

## SOURCE

PROCA1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PROCA1 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169036 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PROCA1 (S-14) is recommended for detection of PROCA1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 PROCA1 siRNA (h): sc-94236, PROCA1 shRNA Plasmid (h): sc-94236-SH and PROCA1 shRNA (h) Lentiviral Particles: sc-94236-V.

Molecular Weight of PROCA1 isoforms: 41/38 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.