

# PCDHA7 (A-15): sc-103782

## BACKGROUND

Protocadherins are a large family of cadherin-like cell adhesion proteins that are involved in the establishment and maintenance of neuronal connections in the brain. There are three protocadherin (PCDH) gene clusters, designated  $\alpha$ ,  $\beta$  and  $\gamma$ , all of which contain multiple tandemly arranged genes. The protein products of PCDH- $\alpha$  genes interact with Integrin  $\beta$ 1 to promote cell adhesion and form oligomers with PCDH- $\gamma$  proteins at specific membrane sites. PCDHA7 (protocadherin  $\alpha$ -7) is a 937 amino acid single-pass transmembrane protein that contains six cadherin domains and functions as a potential calcium-dependent cell-adhesion protein, possibly playing a role in the creation and maintenance of neuronal connections. There are two isoforms of PCDHA7 that are produced as a result of alternative splicing events.

## REFERENCES

1. Wu, Q. and Maniatis, T. 1999. A striking organization of a large family of human neural cadherin-like cell adhesion genes. *Cell* 97: 779-790.
3. Tasic, B., et al. 2002. Promoter choice determines splice site selection in protocadherin  $\alpha$  and  $\gamma$  pre-mRNA splicing. *Mol. Cell.* 10: 21-33.
4. Hirayama, T. and Yagi, T. 2006. The role and expression of the protocadherin- $\alpha$  clusters in the CNS. *Curr. Opin. Neurobiol.* 16: 336-342.
5. Kaneko, R., et al. 2006. Allelic gene regulation of PCDH- $\alpha$  and PCDH- $\gamma$  clusters involving both monoallelic and biallelic expression in single Purkinje cells. *J. Biol. Chem.* 281: 30551-30560.
6. Ribich, S., et al. 2006. Identification of long-range regulatory elements in the protocadherin- $\alpha$  gene cluster. *Proc. Natl. Acad. Sci. USA* 103: 19719-19724.
7. Bonn, S., et al. 2007. Combinatorial expression of  $\alpha$ - and  $\gamma$ -protocadherins alters their presenilin-dependent processing. *Mol. Cell. Biol.* 27: 4121-4132.
8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606317. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
9. Yagi, T. 2008. Clustered protocadherin family. *Dev. Growth Differ.* 50: S131-S140.

## CHROMOSOMAL LOCATION

Genetic locus: PCDHA7 (human) mapping to 5q31.3.

## SOURCE

PCDHA7 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHA7 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103782 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCDHA7 (A-15) is recommended for detection of PCDHA7 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); may cross-react with PCDA1.

Suitable for use as control antibody for PCDHA7 siRNA (h): sc-106381, PCDHA7 shRNA Plasmid (h): sc-106381-SH and PCDHA7 shRNA (h) Lentiviral Particles: sc-106381-V.

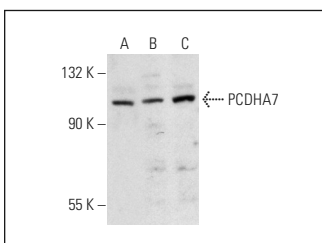
Molecular Weight of PCDHA7: 101 kDa.

Positive Controls: Y79 cell lysate: sc-2240, Jurkat whole cell lysate: sc-2204 or IMR-32 cell lysate: sc-2409.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



PCDHA7 (A-15): sc-103782. Western blot analysis of PCDHA7 expression in Y79 (A), IMR-32 (B) and LNCaP (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](http://www.scbt.com) or our catalog for detailed protocols and support products.