

# PCDHA4 (E-12): sc-103774

## BACKGROUND

Members of the cadherin-related neuronal receptor (CNR) family, including PCDHA4 (also known as CNR1) and PCDHA6 (also known as CNR2), comprise a novel subfamily within the cadherin superfamily of adhesion molecules. The cadherin-related neuronal receptor proteins form a complex with Fyn, a protein tyrosine kinase that is involved in building brain networks and determining patterns of behavior. Cadherin-related neuronal receptor 1 and 2 were discovered during a search for receptor molecules to the Fyn signaling pathway in the mammalian brain. Members of the cadherin superfamily are  $Ca^{2+}$ -dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. The PCDHA4 and PCDHA6 extracellular domains contain six cadherin repeats that mediate  $Ca^{2+}$ -dependent cell adhesion, while the cytoplasmic domains are not homologous with other cadherins.

## REFERENCES

1. Koch, P.J., et al. 1994. Desmosomal cadherins: another growing multigene family of adhesion molecules. *Curr. Opin. Cell Biol.* 6: 682-687.
2. Ranscht, B. 1994. Cadherins and catenins: interactions and functions in embryonic development. *Curr. Opin. Cell Biol.* 6: 740-746.
3. Ayalon, O., et al. 1994. Spatial and temporal relationships between cadherins and PECAM-1 in cell-cell junctions of human endothelial cells. *J. Cell Biol.* 126: 247-258.
4. Takeichi, M. 1995. Morphogenetic roles of classic cadherins. *Curr. Opin. Cell Biol.* 7: 619-627.
5. Kai, N., et al. 1997. Molecular cloning of Fyn-associated molecules in the mouse central nervous system. *J. Neurosci. Res.* 48: 407-424.
6. Kohmura, N., et al. 1998. Diversity revealed by a novel family of cadherins expressed in neurons at a synaptic complex. *Neuron* 20: 1137-1151.
7. Resh, M.D. 1998. Fyn, a Src family tyrosine kinase. *Int. J. Biochem. Cell Biol.* 30: 1159-1162.

## CHROMOSOMAL LOCATION

Genetic locus: PCDHA4 (human) mapping to 5q31.3; Pcdha4 (mouse) mapping to 18 B2, Pcdha4- $\gamma$  (mouse) mapping to 18 A1.

## SOURCE

PCDHA4 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHA4 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-103774 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

PCDHA4 (E-12) is recommended for detection of PCDHA4 of mouse, rat and human origin and PCDHA4- $\gamma$  of mouse 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).

PCDHA4 (E-12) is also recommended for detection of PCDHA4 in additional species, including canine.

Suitable for use as control antibody for PCDHA4 siRNA (h): sc-106377, PCDHA4 shRNA Plasmid (h): sc-106377-SH and PCDHA4 shRNA (h) Lentiviral Particles: sc-106377-V.

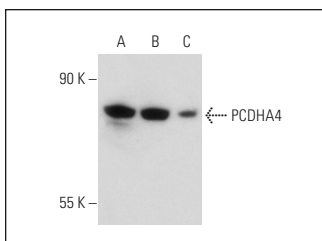
Molecular Weight of PCDHA4: 102 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, IMR-32 cell lysate: sc-2409 or EOC 20 whole cell lysate: sc-364187.

## 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



PCDHA4 (E-12): sc-103774. Western blot analysis of PCDHA4 expression in SK-N-MC (A), IMR-32 (B) and EOC 20 (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.

## PROTOCOLS

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