

# PCDHGA4 (V-13): sc-109819

## 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. PCDHGA4 (protocadherin  $\gamma$ -A4) is a 931 amino acid that is one of 22 proteins encoded by the protocadherin  $\gamma$  cluster. The protocadherin  $\gamma$  cluster consists of three subfamilies (A, B and C) and PCDHGA4 is a member of the  $\gamma$  subfamily A. PCDHGA4 is a type I transmembrane receptor containing six cadherin motifs and is expressed in the central nervous system where it localizes to synapses. Members of the  $\gamma$  cluster of protocadherins are essential for neuronal survival. There are two isoforms of PCDHGA4 that are produced as a result of alternative splicing events.

## REFERENCES

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- Wang, X., et al. 2002.  $\gamma$  protocadherins are required for survival of spinal interneurons. *Neuron* 36: 843-854.
- Kirov, G., et al. 2003. Variation in the protocadherin  $\gamma$  A gene cluster. *Genomics* 82: 433-440.
- Zou, C., et al. 2007. Sequence analysis and expression mapping of the rat clustered protocadherin gene repertoires. *Neuroscience* 144: 579-603.
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## CHROMOSOMAL LOCATION

Genetic locus: Pcdhga4 (mouse) mapping to 18 B3; Pcdhga4 (rat) mapping to 18p11.

## SOURCE

PCDHGA4 (V-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PCDHGA4 of mouse 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-109819 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCDHGA4 (V-13) is recommended for detection of PCDHGA4 of mouse and rat 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).

Suitable for use as control antibody for Pcdhga4 siRNA (m): sc-152091, Pcdhga4 shRNA Plasmid (m): sc-152091-SH and Pcdhga4 shRNA (m) Lentiviral Particles: sc-152091-V.

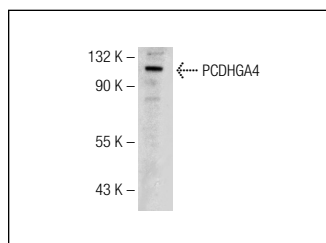
Molecular Weight of PCDHGA4: 101 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



PCDHGA4 (V-13): sc-109819. Western blot analysis of PCDHGA4 expression in SK-N-MC whole cell lysate.

## 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.