## BACKGROUND

As a subfamily of the cadherin superfamily, protocadherins are cadherin-like cell adhesion proteins that contain up to seven extracellular domains and are predominantly expressed in the nervous system. Importantly, the adhesion mechanism of protocadherins is distinct from classic cadherins. Through inactivation or overexpression, several protocadherins have been implicated in a variety of cancers. PCDH7 (protocadherin 7), also known as BHPCDH or BH-Pcdh, is a 1,069 amino acid single-pass I membrane protein that is expressed in the brain and heart. Containing seven cadherin domains, PCDH7 is thought to function in cell-cell recognition and adhesion. PCDH7 exists as three isoforms due to alternative splicing events.

## REFERENCES

1. Yoshida, K., Yoshitomo-Nakagawa, K., Seki, N., Sasaki, M. and Sugano, S. 1998. Cloning, expression analysis, and chromosomal localization of BH-protocadherin (PCDH7), a novel member of the cadherin superfamily. Genomics 49: 458-461.
2. Yoshida, K., Hida, M., Watanabe, M., Yamaguchi, R., Tateyama, S. and Sugano, S. 1999. cDNA cloning and chromosomal mapping of mouse BH-protocadherin. DNA Seq. 10: 43-47.
3. Yoshida, K., Watanabe, M., Kato, H., Dutta, A. and Sugano, S. 1999. BH-protocadherin-c, a member of the cadherin superfamily, interacts with protein phosphatase $1 \alpha$ through its intracellular domain. FEBS Lett. 460: 93-98.
4. Zhang, Z. and DuBois, R.N. 2001. Detection of differentially expressed genes in human colon carcinoma cells treated with a selective COX-2 inhibitor. Oncogene 20: 4450-4456.
5. Yoshida, K. 2003. Fibroblast cell shape and adhesion in vitro is altered by overexpression of the 7a and 7b isoforms of protocadherin 7, but not the 7c isoform. Cell. Mol. Biol. Lett. 8: 735-741.
6. Morishita, H. and Yagi, T. 2007. Protocadherin family: diversity, structure, and function. Curr. Opin. Cell Biol. 19: 584-592.
7. Kim, S.Y., Chung, H.S., Sun, W. and Kim, H. 2007. Spatiotemporal expression pattern of non-clustered protocadherin family members in the developing rat brain. Neuroscience 147: 996-1021.
8. Singh, A.P., Bafna, S., Chaudhary, K., Venkatraman, G., Smith, L., Eudy, J.D., Johansson, S.L., Lin, M.F. and Batra, S.K. 2008. Genome-wide expression profiling reveals transcriptomic variation and perturbed gene networks in androgen-dependent and androgen-independent prostate cancer cells. Cancer Lett. 259: 28-38.
9. Huang, Y.T., Heist, R.S., Chirieac, L.R., Lin, X., Skaug, V., Zienolddiny, S., Haugen, A., Wu, M.C., Wang, Z., Su, L., Asomaning, K. and Christiani, D.C. 2009. Genome-wide analysis of survival in early-stage non-small-cell lung cancer. J. Clin. Oncol. 27: 2660-2667.

## CHROMOSOMAL LOCATION

Genetic locus: PCDH7 (human) mapping to 4p15.1; Pcdh7 (mouse) mapping to 5 C .

## SOURCE

PCDH7 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDH7 of human origin.

## PRODUCT

Each vial contains $200 \mu \mathrm{glgG}$ in 1.0 ml of PBS with $<0.1 \%$ sodium azide and $0.1 \%$ gelatin.
Blocking peptide available for competition studies, sc-104576 P, (100 $\mu \mathrm{g}$ peptide in 0.5 ml PBS containing $<0.1 \%$ sodium azide and $0.2 \% \mathrm{BSA}$ ).

## APPLICATIONS

PCDH7 (E-14) is recommended for detection of PCDH7 of mouse, rat and 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).
PCDH7 (E-14) is also recommended for detection of PCDH7 in additional species, including equine, canine, bovine, porcine and avian.
Suitable for use as control antibody for PCDH7 siRNA (h): sc-88977, PCDH7 siRNA (m): sc-106363, PCDH7 shRNA Plasmid (h): sc-88977-SH, PCDH7 shRNA Plasmid (m): sc-106363-SH, PCDH7 shRNA (h) Lentiviral Particles: sc-88977-V and PCDH7 shRNA (m) Lentiviral Particles: sc-106363-V.

Molecular Weight of PCDH7: 130 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 MarkerTM 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: 1:1001:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz ${ }^{\text {TM }}$ Mounting Medium: sc-24941.

## STORAGE

Store at $4^{\circ} \mathrm{C}$, ${ }^{* *}$ 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.


Satisfation Guaranteed

Try PCDH7 (2D7): sc-517042, our highly recommended monoclonal alternative to $\operatorname{PCDH} 7$ (E-14).

