

# PCSK9 (I-12): sc-34694

## BACKGROUND

Proprotein convertase subtilisin/kexin type 9 (PCSK9), also known as NARC-1, is a 692 amino acid protein that belongs to the peptidase S8 family and contains one peptidase S8 domain. Important in the regulation of plasma cholesterol homeostasis, PCSK9 binds to low-density lipoprotein receptor family members LDLR, very low-density lipoprotein receptor (VLDLR) and apolipoprotein receptor 2 (ApoER2) and promotes their degradation in intracellular acidic compartments. PCSK9 also plays a role in neuronal differentiation and apoptosis. PCSK9 is expressed in Schwann cells, neuro-epithelioma, colon carcinoma, and hepatic and pancreatic cell lines. PCSK9 levels in the brain are highest in the cerebellum during perinatal development, with ischemia causing increased levels in the adult brain. Defects in the gene encoding this protein causes the autosomal dominant disorder familial hypercholesterolemia 3 (FH3).

## REFERENCES

1. Abifadel, M., et al. 2003. Mutations in PCSK9 cause autosomal dominant hypercholesterolemia. *Nat. Genet.* 34: 154-156.
2. Naureckiene, S., et al. 2003. Functional characterization of NARC-1, a novel proteinase related to proteinase K. *Arch. Biochem. Biophys.* 420: 55-67.
3. Rashid, S., et al. 2005. Decreased plasma cholesterol and hypersensitivity to statins in mice lacking Pcsk9. *Proc. Natl. Acad. Sci. USA* 102: 5374-5379.
4. Cohen, J., et al. 2006. Sequence variations in PCSK9, low LDL, and protection against coronary heart disease. *N. Engl. J. Med.* 354: 1264-1272.
5. Poirier, S., et al. 2006. Implication of the proprotein convertase NARC-1/PCSK9 in the development of the nervous system. *J. Neurochem.* 98: 838-850.
6. Horton, J., et al. 2007. Molecular biology of PCSK9: its role in LDL metabolism. *Trends Biochem. Sci.* 32: 71-77.
7. Kysenius, K., et al. 2012. PCSK9 regulates neuronal apoptosis by adjusting ApoER2 levels and signaling. *Cell. Mol. Life Sci.* 69: 1903-1916.

## CHROMOSOMAL LOCATION

Genetic locus: Pcsk9 (mouse) mapping to 4 C7.

## SOURCE

PCSK9 (I-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PCSK9 of mouse origin.

## 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-34694 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PCSK9 (I-12) is recommended for detection of PCSK9 of mouse and rat 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 PCSK9 siRNA (m): sc-45483, PCSK9 shRNA Plasmid (m): sc-45483-SH and PCSK9 shRNA (m) Lentiviral Particles: sc-45483-V.

Molecular Weight (predicted) of PCSK9 isoforms: 74/21 kDa.

Molecular Weight (observed) of PCSK9: 71-90 kDa.

Positive Controls: rat small intestine extract: sc-364811.

## 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.