PRODUCT INFORMATION

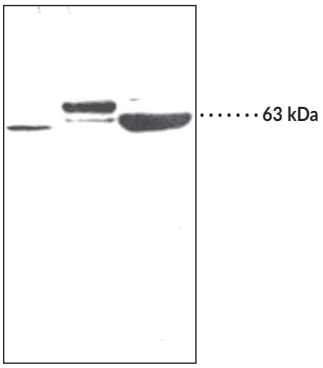
PCSK9 (human) Polyclonal Antibody

Item No. 10007185

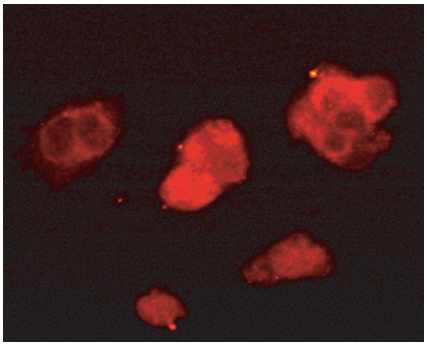
Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified antibody.
Synonyms:	NARC-1, Proprotein Convertase Subtilisin Kexin 9
Immunogen:	Synthetic peptide from an internal region of human PCSK9
Species Reactivity:	(+) Human, mouse, and rat; other species not tested
Uniprot No.:	Q8NBP7
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	Immunofluorescence (IF) and Western blot (WB); the recommended starting dilution is 1:50 and 1:200, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Human liver microsome (50 µg)
Lane 2: HT-29 cell lysate (50 µg)
Lane 3: Rat kidney 100,000 x g supernatant (50 µg)



Immunofluorescent staining HepG2 cells with the PCSK9 polyclonal antibody at 16 µg/ml. The positive cytoplasm staining was visualized in red with a Cy3 conjugated goat anti-rabbit secondary antibody.

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Description

Proprotein convertase subtilisin kexin 9 (PCSK9) is a member of the subtilisin serine protease family with an important role in lipoprotein metabolism.[1] Mutation in the PCSK9 gene is associated with autosomal dominant hypercholesterolemia which is characterized by an increase in low density lipoprotein (LDL) cholesterol levels.[2] PCSK9 overexpression in wild-type mice doubles the plasma total cholesterol, possibly through acceleration of the degradation of the LDL receptor.[1,3] PCSK9 mRNA is detected in various tissues such as liver, kidney, lung, spleen, jejunum, ileum, colon, and muscle with the highest expression in the liver.[4] Human PCSK9 precursor is 692 amino acids in length with an estimated molecular weight of 74 kDa. This proprotein is self-cleaved to form a mature protein at around 63 kDa in the golgi.[5] Cayman's PCSK9 polyclonal antibody detects mainly the mature form of the protein ranging from 62-66 kDa in tissues and cells such as liver, kidney, and colon cancer cells.

References

1. Maxwell, K.N., Fisher, E.A., and Breslow, J.L. Overexpression of PCSK9 accelerates the degradation of the LDLR in a post-endoplasmic reticulum compartment. *Proc. Natl. Acad. Sci. USA* **102(6)**, 2069-2074 (2005).
2. Abifadel, M., Varret, M., Rabès, J.-P., *et al.* Mutations in PCSK9 cause autosomal dominant hypercholesterolemia. *Nature Genet.* **34(2)**, 154-156 (2003).
3. Maxwell, K.N. and Breslow, J.L. Adenoviral-mediated expression of PCSK9 in mice results in a low-density lipoprotein receptor knockout phenotype. *Proc. Natl. Acad. Sci. USA* **101(18)**, 7100-7105 (2004).
4. Seidah, N.G., Benjannet, S., Wickham, L., *et al.* The secretory proprotein convertase neural apoptosis-regulated convertase 1 (NARC-1): Liver regeneration and neuronal differentiation. *Proc. Natl. Acad. Sci. USA* **100(3)**, 928-933 (2003).
5. Maxwell, K.N. and Breslow, J.L. Proprotein convertase subtilisin kexin 9: The third locus implicated in autosomal dominant hypercholesterolemia. *Curr. Opin. Lipidol.* **16**, 167-172 (2005).

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