PRODUCT INFORMATION

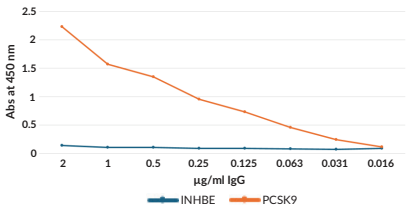
PCSK9 Monoclonal Antibody (Evolocumab)

Item No. 46187

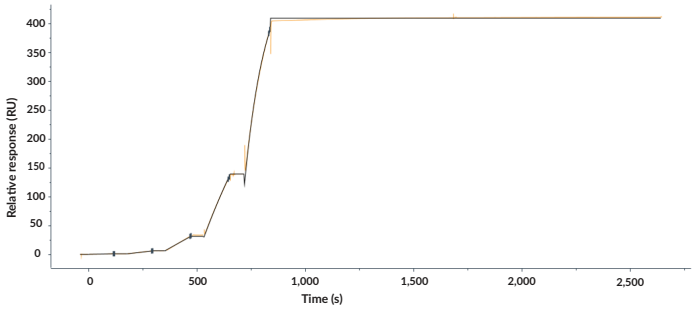
Overview and Properties

Contents: This vial contains 100 µg or 1 mg of recombinant monoclonal antibody.
Synonyms: NARC-1, Proprotein Convertase Subtilisin Kexin 9
Preparation: This antibody is a recombinant human protein expressed in CHO cells using an engineered construct.
Cross Reactivity: (+) PCSK9
Species Reactivity: (+) Human
Uniprot No.: Q8NBP7
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥3 year
Storage Buffer: Sterile PBS, pH 7.2
Host: CHO cells
Isotype: Human IgG2
Applications: ELISA and Surface plasmon resonance (SPR); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/ dilution should be determined empirically.

Images



ELISA. Plates were coated with PCSK9 (human, recombinant) (Item No. 20631) or INHBE (human, recombinant) (Item No. 44741), blocked with BSA, and probed with PCSK9 Monoclonal Antibody (Evolocumab) (Item No. 46187) followed by a goat anti-human IgG HRP secondary antibody.



Representative Image: PCSK9 specifically binds PCSK9 Monoclonal Antibody (Evolocumab). PCSK9 Monoclonal Antibody (Evolocumab) (Item No. 46187) was immobilized on a Series S Sensor Chip CM5 *via* amine coupling. SPR analysis was used to determine PCSK9 (human, recombinant) (Item No. 20631) binding on a Biacore™ 8K, using single-cycle kinetics.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Proprotein convertase subtilisin kexin 9 (PCSK9) is a zymogen and member of the subtilisin serine protease family that reduces protein levels of LDL receptors (LDLRs), the receptor for LDL-cholesterol (LDL-C).[1,2] It is primarily expressed in the liver and is composed of an N-terminal prodomain that regulates PCSK9 maturation, a catalytic domain containing a catalytic aspartic acid-histidine-serine triad, and a C-terminal domain that contains the LDLR binding site.[2-4] PCSK9 is synthesized as a proprotein that is autocatalytically cleaved to generate the 63 kDa mature protein in which the N-terminal prodomain remains non-covalently bound to the catalytic domain to inhibit further activity.[4] The mature PCSK9 is secreted and circulates in the plasma, where it binds to cell surface-expressed LDLRs, triggering endocytosis and lysosomal degradation of the PCSK9-LDLR complex.[2] This action decreases LDLR expression and reduces cellular LDL-C uptake. Gain-of-function and loss-of-function *PCSK9* mutations have been associated with autosomal dominant hypercholesterolemia and decreased plasma LDL-C levels, respectively, in humans.[2] Formulations containing monoclonal antibodies targeting PCSK9 have been used in the treatment of hyperlipidemia, familial hypercholesterolemia, and cardiovascular disease. Cayman's PCSK9 Monoclonal Antibody (Evolocumab) was produced recombinantly from the original PCSK9 antibody sequence and can be used for ELISA and surface plasmon resonance (SPR) applications.

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. Schulz, R., Schlüter, K.-D., and Laufs, U. Molecular and cellular function of the proprotein convertase subtilisin/kexin type 9 (PCSK9). *Basic Res. Cardiol.* **110(2)**, 4 (2015).
3. 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).
4. Burke, A.C., Dron, J.S., Hegele, R.A., *et al.* PCSK9: Regulation and target for drug development for dyslipidemia. *Annu. Rev. Pharmacol. Toxicol.* **57**, 223-244 (2017).

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