

Recombinant Human PCSK9 (carrier-free)

Catalog# / Size	592502 / 10 µg 592504 / 25 µg 592506 / 100 µg 592508 / 500 µg
Regulatory Status	RUO
Other Names	Neural Apoptosis Regulated Convertase 1 (NARC1)
Description	<p>Protein convertase subtilisin/kexin 9 (PCSK9) possesses a signal peptide (aa 1-30), a prosegment (PRO) (aa 31-152), a catalytic domain (aa 153-407), a hinge region (aa 408-452), and a C-terminal Cys-His-rich domain (CHRD) (aa 453-692). This protein is primarily synthesized and secreted by hepatocytes. Besides liver, it is also expressed in the small intestine, kidney, and brain, and it is present in plasma. Upon translocation to the endoplasmic reticulum, the prosegment of PCSK9 is autocatalytically cleaved at the VFAQ152QSIP site and secreted as a stable, enzymatically inactive, non-covalent complex. Elevated low density lipoprotein-cholesterol (LDLc) level is a major risk factor for cardiovascular disease and atherosclerosis. LDLc is cleared from circulation by the LDL receptor (LDLR); PCSK9 is a regulator of LDLc levels through the binding of LDLR, subsequently leading to the degradation of LDLR. Therefore, it is biologically plausible that drugs inhibiting PCSK9 would lower heart attacks and other diseases caused by increased cholesterol. PCSK9 also binds to other LDLR family members such as very low density lipoprotein receptor (VLDLR), apolipoprotein E receptor (LRP1/APOER), and apolipoprotein receptor 2 (LRP8/APOER2), which lead to their degradation in the intracellular acidic compartments. Like the LDLR, gene expression of PCSK9 is positively regulated by SREBP-2, a transcription factor that is activated in response to cellular cholesterol depletion.</p>

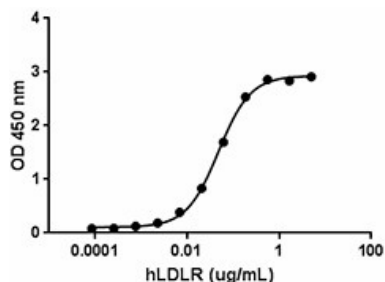
Product Details

Source	Human PCSK9, amino acids (Arg29-Gln692) (Accession# NP_777596) was expressed with C-terminal TGHHHHHHHGGGQ tag in CHO cell line.
Molecular Mass	Predicted molecular mass of approximately 73 kD. It migrates as 70 and 17 kD for mature and prodomain, respectively, in DTT-reducing conditions and 63 and 17 kD in non-reducing conditions by SDS-PAGE.
Purity	>90%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in 20 mM Tris, 150 mM NaCl, pH 8.0.
Endotoxin Level	Less than 1 EU per µg protein as determine by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	When human PCSK9 is immobilized at 1 µg/mL, human LDLR binds with EC ₅₀ of 0.025 - 0.1 µg/mL in a functional ELISA.
Application	Bioassay
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .

Antigen Details

Structure	Monomer
Distribution	Hepatocytes, neuro-epithelioma, colon carcinoma, Schwann cells
Function	PCSK9 regulates LDLR, VLDLR, APOER, and APOER2 levels, and, therefore LDLc level. PCSK9 is regulated by SREBP-2.
Interaction	Hepatocytes
Ligand/Receptor	LDLR, VLDLR, APOB, LRP1, LRP8
Biology Area	Cell Biology, Neuroinflammation, Neuroscience, Signal Transduction
Molecular Family	Enzymes and Regulators
Antigen References	<ol style="list-style-type: none">1. Seidah NG, <i>et al.</i> 2003. <i>Proc. Natl. Acad. Sci. USA</i> 100:928.2. Naureckiene S, <i>et al.</i> 2003. <i>Arch. Biochem. Biophys.</i> 420:55.3. Costet P, <i>et al.</i> 2008. <i>Trends Biochem. Sci.</i> 33:426.4. Tibolla G, <i>et al.</i> 2011. <i>Nutr. Metab. Cardiovasc. Dis.</i> 21:835.
Gene ID	255738

Product Data



When human PCSK9 is immobilized at 1 $\mu\text{g/mL}$, human LDLR binds with EC_{50} of 0.025 - 0.1 $\mu\text{g/mL}$ in a functional ELISA.

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587