Catalog # PC9-H5223



#### Synonym

PCSK9,FH3,HCHOLA3,LDLCQ1,NARC1,PC9

#### Source

Human PCSK9, His Tag(PC9-H5223) is expressed from human 293 cells (HEK293). It contains AA Gln 31 - Gln 692 (Accession # <u>Q8NBP7-1</u>). Predicted N-terminus: Gln 31 & Ser 153

## **Molecular Characterization**

PCSK9(Gln 31 - Gln 692) Q8NBP7-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus. This protein undergoes autocatalytic cleavage to release the pro-peptide and mature chain. The pro-peptide and mature chain are associated through non-covalent interactions and with a calculated MW of 13.8 kDa and 59.2 kDa respectively. The protein migrates as 17 kDa and 65-70 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 1.0 EU per  $\mu g$  by the LAL method / rFC method.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

#### Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

#### Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 24 months under sterile conditions after reconstitution.

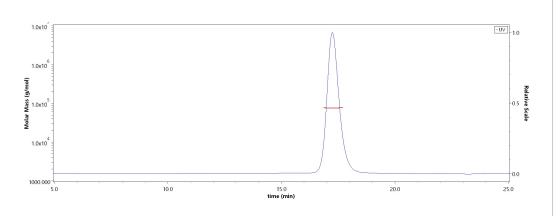
### SDS-PAGE

kDa	Μ	R
116.0	_	
66.2	_	_
45.0	-	
35.0	-	
25.0	_	
18.4		
14.4	_	

Human PCSK9, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

# SEC-MALS

<u>Report</u>



The purity of Human PCSK9, His Tag (Cat. No. PC9-H5223) is more than 90% and the molecular weight of this protein is around 70-80 kDa verified by SEC-MALS.

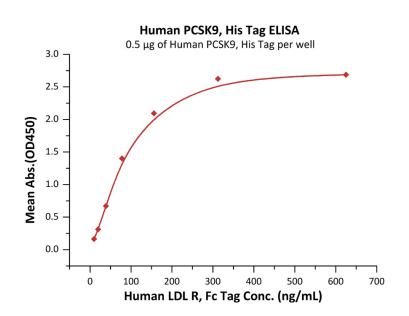


**Bioactivity-ELISA** 

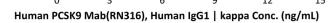


## Human PCSK9 Protein, His Tag (MALS verified)

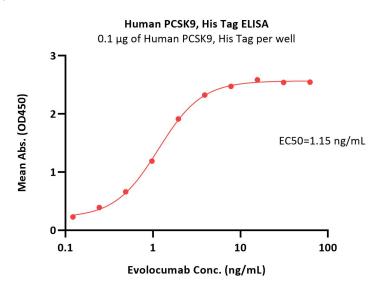
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Human PCSK9, His Tag ELISA  $0.2\ \mu g$  of Human PCSK9, His Tag per well 3.0 2.5 Mean Abs.(OD450) 2.0 1.5 1.0 0.5 0.0 0 3 6 9 12 15

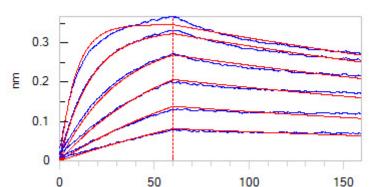


Immobilized Human PCSK9, His Tag (Cat. No. PC9-H5223) at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Human LDL R, Fc Tag with a linear range of 10-156 ng/mL (QC tested).

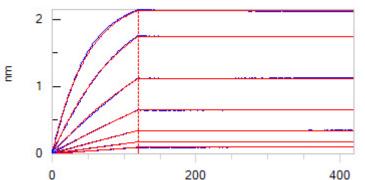


Immobilized Human PCSK9, His Tag (Cat. No. PC9-H5223) at 1  $\mu$ g/mL (100  $\mu$ L/well) on Monoclonal Anti-His Tag Antibody, Mouse IgG1 (AY63) precoated (0.1  $\mu$ g/well) plate can bind Evolocumab with a linear range of 0.1-4 ng/mL (Routinely tested).

### **Bioactivity-BLI**



Immobilized Human PCSK9, His Tag (Cat. No. PC9-H5223) at 2  $\mu$ g/mL (100  $\mu$ L/well) on an Nickel Coated plate can bind Human PCSK9 Mab (RN316), Human IgG1 with a linear range of 0.2-3 ng/mL (Routinely tested).





## Time (sec)

Loaded Human LDL R, Fc Tag on Protein A Biosensor, can bind Human PCSK9, His Tag (Cat. No. PC9-H5223) with an affinity constant of 2.17 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Loaded PCSK9 Mab, Human IgG1 on Protein A Biosensor, can bind Human PCSK9, His Tag (Cat. No. PC9-H5223) with an affinity constant of 88.6 pM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



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### Background

Proprotein convertase subtilisin/kexin type 9 (PCSK9) is also known as NARC1 (neural apoptosis regulated convertase), is a newly identified subtilase belonging to the peptidase S8 subfamily. Mouse PCSK9 is synthesized as a soluble zymogen, and undergoes autocatalytic intramolecular processing in the endoplasmic reticulum, resulting in the cleavage of its propeptide that remains associated with the secreted active enzyme with a broad alkaline pH optimum. This protein plays a major regulatory role in cholesterol homeostasis. PCSK9 binds to the epidermal growth factor-like repeat A (EGF-A) domain of the low-density lipoprotein receptor (LDLR), inducing LDLR degradation. PCSK9 may also have a role in the differentiation of cortical neurons. Mutations in this gene have been associated with a rare form of autosomal dominant familial hypercholesterolemia (HCHOLA3).



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