

#### Synonym

PCSK9,FH3,HCHOLA3,LDLCQ1,NARC1,PC9

#### Source

Hamster PCSK9, His Tag(PC9-H52E4) is expressed from human 293 cells (HEK293). It contains AA Gln 30 - Ser 691 (Accession # <u>G3GTK5</u>). Predicted N-terminus: Gln 30

# **Molecular Characterization**

PCSK9(Gln 30 - Ser 691) Poly-his G3GTK5

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 13.9 kDa and 59.0 kDa respectively. The protein migrates as 18 kDa and 65 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

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

# Purity

>95% as determined by SDS-PAGE.

#### 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 12 months in lyophilized state;
- $70^{\circ}$ C for 3 months under sterile conditions after reconstitution.

# **SDS-PAGE**

kDa	м	R
116.0	-	
66.2	-	-
45.0	-	
35.0	-	
25.0	-	
18.4	-	-
14.4	-	

Hamster 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 95%.

#### **Bioactivity-ELISA**

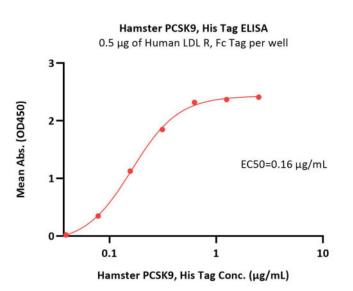


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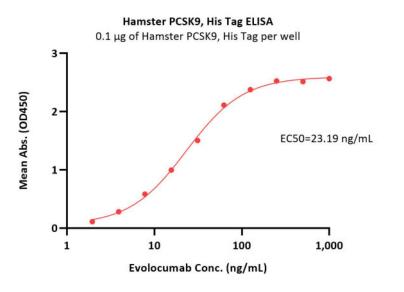


# Hamster PCSK9 Protein, His Tag

Catalog # PC9-H52E4

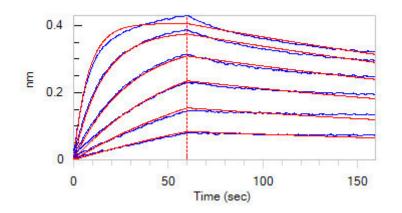






Immobilized Human LDL R, Fc Tag at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Hamster PCSK9, His Tag (Cat. No. PC9-H52E4) with a linear range of 0.078-0.313  $\mu$ g/mL (QC tested). Immobilized Hamster PCSK9, His Tag (Cat. No. PC9-H52E4) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Evolocumab with a linear range of 2-63 ng/mL (Routinely tested).

## **Bioactivity-BLI**



Loaded Human LDL R, Fc Tag on Protein A Biosensor, can bind Hamster PCSK9, His Tag (Cat. No. PC9-H52E4) with an affinity constant of 4.09 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

#### 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).

#### **Clinical and Translational Updates**



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