

### **Synonym**

PCSK9,FH3,HCHOLA3,LDLCQ1,NARC1,PC9

### Source

Rhesus macaque PCSK9, His Tag(PC9-C52H2) is expressed from human 293 cells (HEK293). It contains AA Gln 31 - Gln 692 (Accession # <u>A8T666</u>). Predicted N-terminus: Gln 31

### **Molecular Characterization**

# PCSK9(Gln 31 - Gln 692) A8T666

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 propeptide and mature chain are associated through non-covalent interactions and with a calculated MW of 13.9 kDa and 59.4 kDa respectively. The protein migrates as 17 kDa and 60-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

#### **Endotoxin**

Less than 1.0 EU per µg 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

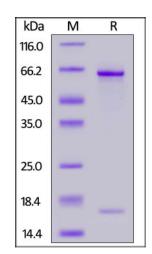
For long term storage, the product should be stored at lyophilized state at -20 $^{\circ}$ C or lower.

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°C for 3 months under sterile conditions after reconstitution.

# **SDS-PAGE**

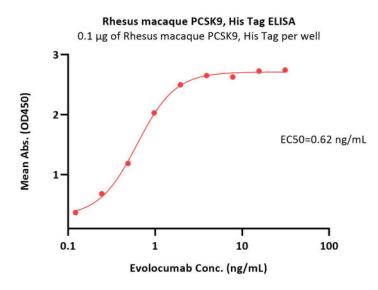


Rhesus macaque PCSK9, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

# **Bioactivity-ELISA**

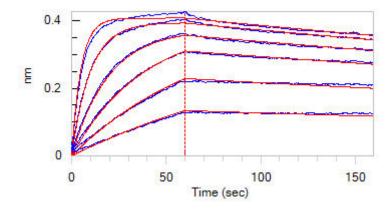






Immobilized Rhesus macaque PCSK9, His Tag (Cat. No. PC9-C52H2) at 1  $\mu$ g/mL (100  $\mu$ L/well) on Monoclonal Anti-His Tag Antibody, Mouse IgG1 (AY63) precoated (0.1  $\mu$ g/well) plate can bind Evolocumab with a linear range of 0.1-1 ng/mL (Routinely tested).

### **Bioactivity-BLI**



Loaded Human LDL R, Fc Tag on Protein A Biosensor, can bind Rhesus macaque PCSK9, His Tag (Cat. No. PC9-C52H2) with an affinity constant of 1.36 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**

