

## PCSK9 Protein, Human, Recombinant (D374Y & V474I & G670E, His)

### General Information

Synonyms:	FH3;proprotein convertase subtilisin/kexin type 9;LDLCQ1;HCHOLA3;NARC1;PC9;NARC-1
Protein Construction:	A DNA sequence encoding the human PCSK9 (NP_777596.2, with mutation Asp 374 Tyr, natural mutation Val 474 Ile and Gly 670 Glu) (Met 1-Gln 692) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 32
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAV67948.1
Molecular Weight:	72.6 kDa (predicted)

### QC Testing

Biological Activity:	1.Measured by its binding ability in a functional ELISA. Immobilized human PCSK9-His(D374Y) at 10 µg/mL (100 µL /well) can bind biotinylated LDLR-His , The EC50 of biotinylated LDLR-His is 0.2-1.4µg/mL. 2.Loaded Recombinant Human LDLR/LDL Receptor Protein, mFc Tag on ProA Biosensor, can bind Human PCSK9 / NARC1 (D374Y, V474I, G670E) Protein, His Tag with an affinity constant of 3.08nM as determined in BLI assay (Routinely tested).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 20 mM Tris, 100 mM NaCl, 10% Glycerol, 0.01% Tween20, pH 8.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Proprotein convertase subtilisin/kexin type 9 (PCSK9), also known as NARC1 (neural apoptosis regulated convertase), which is a newly identified human secretory subtilase belonging to the proteinase K subfamily of the secretory subtilase family. PCSK9 protein is an enzyme which in humans is encoded by the PCSK9 gene with orthologs found across many species. It is expressed in neuroepithelioma, colon carcinoma, hepatic and pancreatic cell lines, and in Schwann cells. PCSK9 protein is highly expressed in the liver and regulates low density lipoprotein receptor (LDLR) protein levels. Inhibition of PCSK9 protein function is currently being explored as a means of lowering cholesterol levels. Thereby, PCSK9 protein is regarded as a new strategy to treat hypercholesterolemia. PCSK9 protein contributes to cholesterol homeostasis and may have a role in the differentiation of cortical neurons.

### Reference

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481