

Human PCSK9 (D374Y) Protein, His Tag (MALS verified)

Catalog # PCY-H5225



BIOSYSTEMS
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Synonym

PCSK9,FH3,HCHOLA3,LDLCQ1,NARC1,PC9

Source

Human PCSK9 (D374Y), His Tag(PCY-H5225) is expressed from human 293 cells (HEK293). It contains AA Gln 31 - Gln 692 (Accession # [Q8NBP7-1](#) (D374Y)).

Predicted N-terminus: Gln 31

Molecular Characterization



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 58.2 kDa respectively. The protein migrates as 15 kDa and 55-65 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation. The D374Y mutation results in higher affinity of PCSK9 for LDLR.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm 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

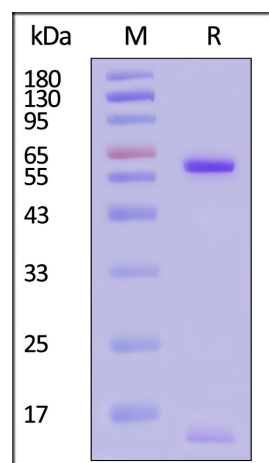
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human PCSK9 (D374Y), 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% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

SEC-MALS



The purity of Human PCSK9 (D374Y), His Tag (Cat. No. PCY-H5225) is more than 90% and the molecular weight of this protein is around 55-80 kDa verified by SEC-MALS.

[Report](#)

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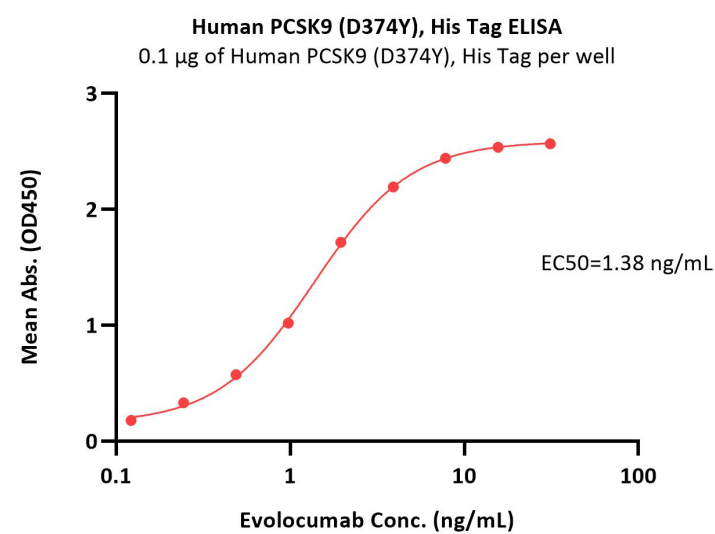
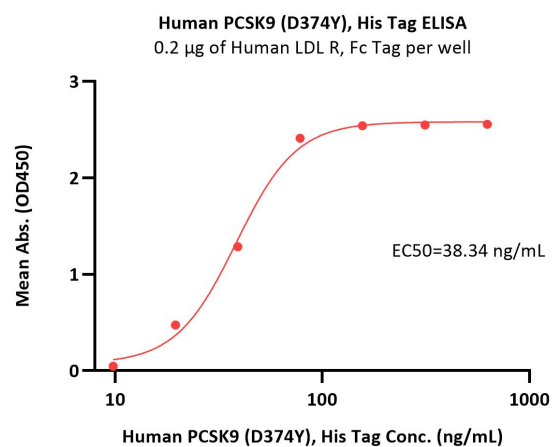


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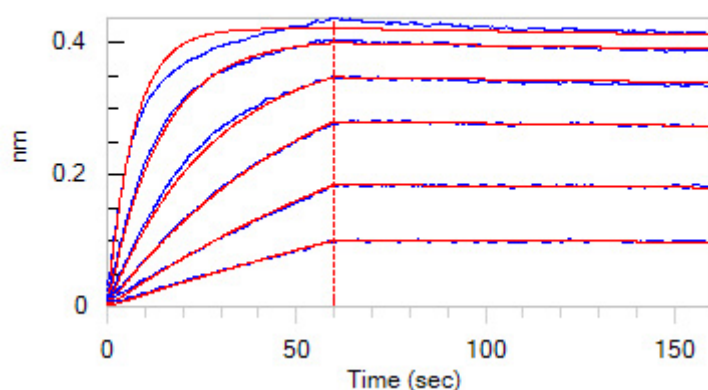
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Immobilized Human LDL R, Fc Tag at 2 µg/mL (100 µL/well) can bind Human PCSK9 (D374Y), His Tag (Cat. No. PCY-H5225) with a linear range of 20-78 ng/mL (QC tested).

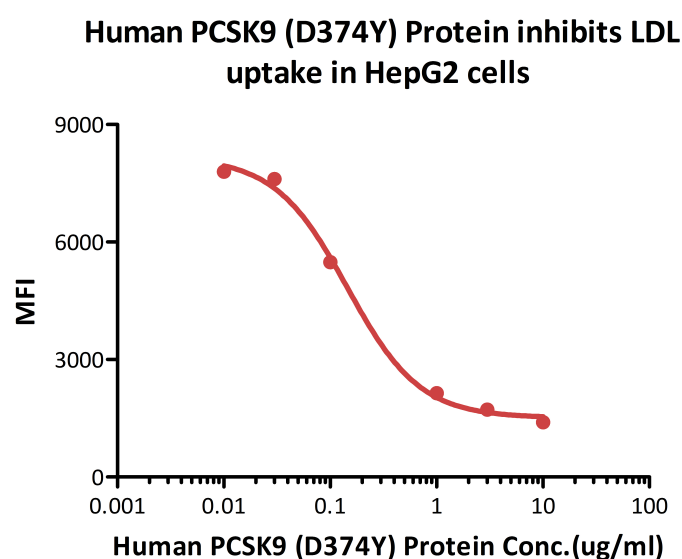
Immobilized Human PCSK9 (D374Y), His Tag (Cat. No. PCY-H5225) at 1 µg/mL (100 µL/well) on Monoclonal Anti-His Tag Antibody, Mouse IgG1 (AY63) precoated (0.1 µg/well) plate can bind Evolocumab with a linear range of 0.1-4 ng/mL (Routinely tested).

Bioactivity-BLI

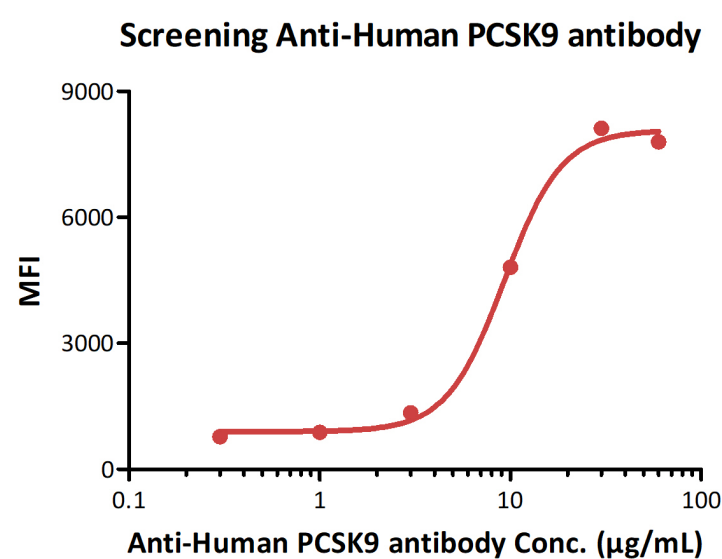


Loaded Human LDL R, Fc Tag on Protein A Biosensor, can bind Human PCSK9 (D374Y), His Tag (Cat. No. PCY-H5225) with an affinity constant of 0.329 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-FACS



FACS analysis shows that Human PCSK9 (D374Y), His Tag (Cat. No. PCY-H5225) inhibits LDL uptake in HepG2 cells. The EC50 for this effect is



FACS analysis shows that the effect of Human PCSK9 (D374Y), His Tag (Cat. No. PCY-H5225) inhibiting LDL uptake in HepG2 cells was neutralized by

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0.0689-0.3049 µg/mL.

Anti-Human PCSK9 antibody. The concentration of PCSK9 used is 5 µg/mL.
The EC50 for Anti-Human PCSK9 antibody is 6.816-12.67 µg/mL.

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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