

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human Proprotein Convertase 9/PCSK9 protein Gln31-Gln152 (pro domain), Ser153-Gln692 (mature form) with a C-terminal 6-His and Avitag Accession # ABV59216.1
N-terminal Sequence Analysis	Gln32 (pro domain) & Ser153 (mature form)
Structure / Form	Mature form Biotinylated via Avi-tag & prodomain
Predicted Molecular Mass	14 kDa & 60 kDa

SPECIFICATIONS

SDS-PAGE	18-21 & 62-69, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human LDLR (Catalog # 2148-LD/CF) is immobilized at 1 µg/mL (100 µL/well), Biotinylated Recombinant Human Proprotein Convertase 9/PCSK9 His-tag Avi-tag (Catalog # AVI3888) binds with an ED ₅₀ of 0.150-1.20 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Supplied as a 0.2 µm filtered solution in Tris, NaCl and Glycerol. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 6 months from date of receipt, -20 to -70 °C as supplied. • 3 months, -20 to -70 °C under sterile conditions after opening.

DATA

<p>Binding Activity</p> <p>Biotinylated Recombinant Human Proprotein Convertase 9/PCSK9 His-tag Avi-tag Protein Binding Activity. When Recombinant Human LDLR (Catalog # 2148-LD/CF) is immobilized at 1 µg/mL (100 µL/well), Biotinylated Recombinant Human Proprotein Convertase 9/PCSK9 His-tag Avi-tag Protein (Catalog # AVI3888) binds with an ED₅₀ of 0.150-1.20 µg/mL.</p>	<p>SDS-PAGE</p> <p>Biotinylated Recombinant Human Proprotein Convertase 9/PCSK9 His-tag Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human Proprotein Convertase 9/PCSK9 His-tag Avi-tag Protein (Catalog #) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 18-21 kDa & 62-69 kDa, under reducing conditions.</p>
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BACKGROUND

PCSK9 (proprotein convertase subtilisin kexin 9), also known as NARC-1, is a member of the proteinase K subfamily of subtilisin-related serine endoproteases. It is highly expressed in the liver, intestine, and kidney and plays an important role in regulating LDL R expression and circulating cholesterol levels (1). PCSK9 is synthesized as precursor protein that is autocatalytically cleaved in the endoplasmic reticulum to generate a 14 kDa prodomain and a 60 kDa catalytic domain (2). Within the secretion pathway, the prodomain remains associated with and functions as a chaperone for the catalytic domain (2). Although the other members of the proprotein convertase family demonstrate activity on several downstream targets, PCSK9 protease activity has only been demonstrated through its autocatalytic processing (3). PCSK9 plays a key role in the regulation of cholesterol metabolism by binding to hepatic LDL R, LRP-1, VLDL R, and Apolipoprotein E R2 and promoting their lysosomal degradation instead of recycling to the plasma membrane (4-7). It can also regulate cholesterol and triglyceride handling in the intestine and adipose tissue (8-10). These reported functions create significant interest in PCSK9 as a pharmacological target in cardiovascular disease (11). PCSK9 has been reported to interact with non-LDR targets as well, including mediators of inflammation and immunological processes (12).

References:

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