PCSK9 Protein, Human (D374Y, HEK293, His)

Cat. No.:	HY-P78663
Synonyms:	PCSK9; FH3; HCHOLA3; LDLCQ1; NARC1; PC9
Species:	Human
Source:	HEK293
Accession:	Q8NBP7 (Q31-Q692, D374Y)
Gene ID:	255738
Molecular Weight:	Approximately 17 & 70 kDa

PROPERTIES

AA Sequence

Q E D E D G D Y E E L V L A L R S E E D G L A E A P E H G T T A T F H R C A K D
P W R L P G T Y V V V L K E E T H L S Q S E R T A R R L Q A Q A A R R G Y L T K
I L H V F H G L L P G F L V K M S G D L L E L A L K L P H V D Y I E E D S S V F
A Q S I P W N L E R I T P P R Y R A D E Y Q P P D G G S L V E V Y L L D T S I Q
S D H R E I E G R V M V T D F E N V P E E D G T R F H R Q A S K C D S H G T H L
A G V V S G R D A G V A K G A S M R S L R V L N C Q G K G T V S G T L I G L E F
I R K S Q L V Q P V G P L V V L L P L A G G Y S R V L N A A C Q R L A R A G V V
L V T A A G N F R D D A C L Y S P A S A P E V I T V G A T N A Q D Q P V T L G T
L G T N F G R C V D L F A P G E D I I G A S S Y C S T C F V S Q S G T S Q A A A
H V A G I A A M M L S A E P E L T L A E L R Q R L I H F S A K D V I N E A W F P
E D Q R V L T P N L V A A L P P S T H G A G W Q L F C R T V W S A H S G P T R M
A T A V A R C A P D E E L L S C S S F S R S G K R R G E R M E A Q G G K L V C R
A H N A F G G E G V Y A I A R C C L L P Q A N C S V H T A P P A E A S M G T R V
H C H Q Q G H V L T G C S S H W E V E D L G T H K P P V L R P R G Q P N Q C V G
H R E A S I H A S C C H A P G L E C K V K E H G I P A P Q E Q V T V A C E E G W
T L T G C S A L P G T S H V L G A Y A V D N T C V V R S R D V S T T G S T S E G
A V T A V A I C C R S R H L A Q A S Q E L Q

Biological Activity	Measured by its ability to inhibit the proliferation of HT-29 human coloncancer cells. The ED_{50} for this effect is 16.92 ng/mL, corresponding to a specificactivity is 5.91×10^4 Unit/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is

	recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	PCSK9 protein emerges as a pivotal regulator in the intricate orchestration of plasma cholesterol homeostasis. Demonstrating its influence on low-density lipid receptor family members, including the low-density lipoprotein receptor (LDLR), very low-density lipoprotein receptor (VLDLR), apolipoprotein E receptor (LRP1/APOER), and apolipoprotein receptor 2 (LRP8/APOER2), PCSK9 facilitates their degradation within intracellular acidic compartments. Employing a non-proteolytic mechanism, it enhances the hepatic LDLR degradation through a clathrin LDLRAP1/ARH-mediated pathway, possibly impeding LDLR recycling and directing it toward lysosomal degradation. Moreover, PCSK9 exhibits LDLR-independent inhibition of APOB intracellular degradation via the autophagosome/lysosome pathway and plays a role in the disposal of non-acetylated BACE1 intermediates in the early secretory pathway. Notably, it regulates epithelial Na(+) channel (ENaC)-mediated Na(+) absorption by augmenting ENaC proteasomal degradation, and influences neuronal apoptosis through the modulation of LRP8/APOER2 levels and associated anti-apoptotic signaling pathways.

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