

## PCSK9 Protein, Rhesus Macaque (HEK293, His)

Cat. No.:	HY-P75958
Synonyms:	Proprotein convertase subtilisin/kexin type 9; NARC-1; PC9; PCSK9
Species:	Rhesus Macaque
Source:	HEK293
Accession:	A8T666 (Q31-Q692)
Gene ID:	717147
Molecular Weight:	Approximately 20&62 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 D A P E H G A	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 R 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 H 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 A R Y R A D E	Y Q P P K 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 S 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 G L 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 F 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 D C S T C F V	S R 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 R	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 Q D	E E L L S C S S F S	R S G K R R G E R I	E A Q G G K R V C R
A H N A F G G E G V	Y A I A R C C L L P	Q V N C S V H T A P	P A G 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 I V A C E D G W
T L T G C S P 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 K E
A V A A V A I C C R	S R H L V Q A S Q E	L Q	

**Biological Activity** Immobilized Rhesus PCSK9 at 5 µg/mL (100 µL/well) can bind Biotinylated rmlDLR. The ED<sub>50</sub> for this effect is 224.2 ng/mL

**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.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. 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 plays a crucial role in maintaining the balance of cholesterol levels in the blood. It binds to several receptors involved in lipid metabolism, including LDLR, VLDLR, LRP1/APOER, and LRP8/APOER2, and promotes their degradation in acidic compartments inside cells. It enhances the degradation of hepatic LDLR through a non-proteolytic mechanism mediated by clathrin LDLRAP1/ARH pathway. Additionally, it may disrupt the recycling of LDLR, directing it to lysosomes for degradation. PCSK9 can also induce ubiquitination of LDLR, leading to its subsequent breakdown. Furthermore, it inhibits the degradation of APOB, an important component of lipoproteins, through the autophagosome/lysosome pathway, independently of LDLR. In the early secretory pathway, PCSK9 helps dispose of non-acetylated intermediates of BACE1. It also plays a role in regulating the absorption of sodium ions through the ENaC channel by reducing its surface expression through increased proteasomal degradation. Finally, PCSK9 regulates neuronal apoptosis by modulating the levels of LRP8/APOER2 and related anti-apoptotic signaling pathways.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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