

## PCSK9 Protein, *Macaca nemestrina* (HEK293, His)

<b>Cat. No.:</b>	HY-P70966
<b>Synonyms:</b>	Proprotein Convertase Subtilisin/Kexin Type 9; Proprotein Convertase 9; PC9; Subtilisin/Kexin-Like Protease PC9; PCSK9
<b>Species:</b>	Cynomolgus
<b>Source:</b>	HEK293
<b>Accession:</b>	A8T662 (Q31-Q152&S153-Q692)
<b>Gene ID:</b>	105495119
<b>Molecular Weight:</b>	(16-21)&(55-77) 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 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 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

The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

#### Appearance

Solution.

#### Formulation

Supplied as a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, 0.1 M Arg, 0.1 M Glu, 20% glycerol, 0.01% tween20, 5% Trehalose, pH 6.0.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

N/A

#### Storage & Stability

Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for

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extended storage. Avoid repeated freeze-thaw cycles.

**Shipping**

Shipping with dry ice.

## DESCRIPTION

### Background

PCSK9 protein plays a crucial role in maintaining the balance of plasma cholesterol levels. It interacts with low-density lipoprotein receptor family members such as LDLR, VLDLR, LRP1/APOER, and LRP8/APOER2, promoting their degradation within acidic compartments of the cell. Through a non-proteolytic mechanism, it enhances the degradation of hepatic LDLR via a clathrin LDLRAP1/ARH-mediated pathway, preventing its recycling from endosomes to the cell surface and directing it to lysosomes for degradation. Additionally, PCSK9 can induce ubiquitination of LDLR, leading to its subsequent degradation. It also inhibits the intracellular degradation of APOB, independent of LDLR, by affecting the autophagosome/lysosome pathway. Moreover, PCSK9 is involved in the early secretory pathway by disposing of non-acetylated intermediates of BACE1. It further regulates epithelial Na(+) channel (ENaC)-mediated Na(+) absorption by reducing ENaC surface expression, primarily through increased proteasomal degradation. Finally, PCSK9 modulates neuronal apoptosis by regulating 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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