

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Proprotein Convertase 9/PCSK9 in direct ELISAs and Western blots. In Western blots, 10% cross-reactivity with recombinant mouse PCSK9 is observed and no cross-reactivity with recombinant human (rh) PCSK1 or rhPCSK7 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2B</sub> Clone # 499911
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Proprotein Convertase 9/PCSK9 Arg29-Gln692 Accession # Q8NBP7
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Human Proprotein Convertase 9/PCSK9 (Catalog # 3888-SE)
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Proprotein Convertase 9/PCSK9 (Catalog # 3888-SE), see our available <a href="#">Western blot detection antibodies</a>

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The human PCSK9 gene encodes Proprotein Convertase 9 (PC9), which is also known as Neural Apoptosis Regulated Convertase 1 (NARC1) (1). The deduced amino acid sequence of human PCSK9 consists of a signal peptide (aa 1 to 30), a propeptide (aa 31 to 152), and a mature chain (aa 153 to 692) that contains a serine protease domain (aa 161 to 431) found in members of the furin/PC family. PCSK9 protease activity may be limited, since it has only been demonstrated through its own autocatalytic processing (2). After the autocleavage in the ER, the pro domain and mature chain exit the cell together through non-covalent interactions (3). PCSK9 is a key regulator of LDL-cholesterol levels (LDL-C) through binding of the LDL receptor, resulting in the reduction of receptor recycling to the cell surface and the acceleration of receptor degradation in lysosomes (3). Both gain of function (GOF) and loss-of-function (LOF) mutations have been found in the PCSK9 gene (3). GOF mutations are linked to familial autosomal dominant hypercholesterolemia, a disease characterized by elevated plasma levels of LDL-C. In comparison, LOF mutations lead to low levels of LDL-C and protection against coronary heart disease.

### References:

1. Seidah, N.G. *et al.* (2003) *Proc. Natl. Acad. Sci. USA* **100**:928.
2. Naureckiene, S. *et al.* (2003) *Arch. Biochem. Biophys.* **420**:55.
3. Costet, P. *et al.* (2008) *Trends Biochem. Sci.* **33**:426.