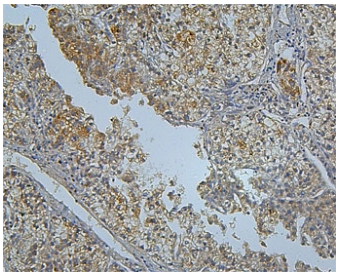
PCSK9 Antibody / Proprotein Convertase Subtilisin Kexin 9 Antibody (RQ5601)

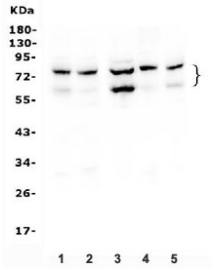
Catalog No.	Formulation	Size
RQ5601	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

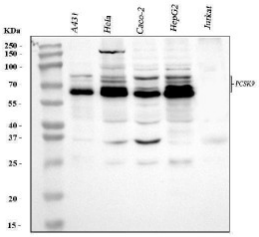
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q8NBP7
Localization	Cell surface, cytoplasm, secreted
Applications	Western blot: 0.25-0.5ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This PCSK9 Antibody / Proprotein Convertase Subtilisin Kexin 9 Antibody is available for research use only.



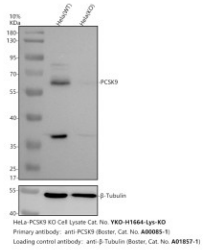
PCSK9 Antibody Immunohistochemistry. IHC staining of FFPE human liver cancer with PCSK9 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



PCSK9 Antibody WB. Western blot testing of human 1) HeLa, 2) Caco-2, 3) HepG2, 4) A549 and 5) K562 cell lysate with PCSK9 antibody. Predicted molecular weight: pro/mature form ~74/64 kDa.



PCSK9 Antibody WB in Human A431, HeLa, Caco-2, HepG2, and Jurkat Cells. Western blot analysis of human A431 (lane 1), HeLa (lane 2), Caco-2 (lane 3), HepG2 (lane 4), and Jurkat (lane 5) whole-cell lysates using the Proprotein Convertase Subtilisin Kexin 9 Antibody at 0.5 ug/ml. Prominent bands are detected at approximately 66 kDa in A431, HeLa, Caco-2, and HepG2 lysates, with additional bands near 80 kDa in several samples. These positions are consistent with the reported mature and precursor forms of PCSK9, respectively. The predicted molecular weight is approximately 72-74 kDa. Samples were loaded at 30 ug per lane and separated by 5-20% SDS-PAGE under reducing conditions.



PCSK9 Antibody WB in HeLa Wild-Type and PCSK9 Knockout Cells. Western blot analysis of human HeLa wild-type (lane 1) and PCSK9 knockout (lane 2) whole-cell lysates using the Proprotein Convertase Subtilisin Kexin 9 Antibody. A prominent band at approximately 60-65 kDa is detected in wild-type cells but is absent from the knockout sample, supporting PCSK9-specific recognition. An additional band near 38 kDa is substantially reduced in the knockout lysate, although its identity has not been established. Samples were loaded at 30 ug per lane and separated by 10% SDS-PAGE under reducing conditions. The primary antibody was used at 0.5 ug/ml, with beta-tubulin serving as the loading control.

Description

PCSK9 Antibody / Proprotein Convertase Subtilisin Kexin 9 Antibody targets proprotein convertase subtilisin/kexin type 9 (PCSK9), a secreted protein that plays a central role in cholesterol homeostasis by regulating the abundance of low-density lipoprotein receptors (LDLR). PCSK9 is produced predominantly by hepatocytes and belongs to the subtilisin-like proprotein convertase family. Unlike many related proteases, mature PCSK9 primarily functions through protein interactions rather than conventional catalytic processing of extracellular substrates. Its ability to regulate LDLR availability makes it an important determinant of circulating low-density lipoprotein cholesterol (LDL-C) concentrations.

PCSK9 is synthesized as a precursor that undergoes autocatalytic cleavage within the endoplasmic reticulum. This processing generates a mature protein that remains associated with its inhibitory prodomain, a structural arrangement required for proper secretion. Following release into the circulation, PCSK9 binds the epidermal growth factor-like repeat A domain of LDLR. The resulting complex can be internalized through receptor-mediated endocytosis, after which PCSK9 promotes lysosomal degradation of LDLR rather than allowing efficient receptor recycling to the cell surface. Reduced LDLR abundance limits hepatic clearance of circulating LDL particles and contributes to increased plasma cholesterol concentrations.

PCSK9 expression is regulated by metabolic and transcriptional mechanisms, including sterol regulatory element-binding protein 2 (SREBP2). When intracellular cholesterol availability decreases, SREBP2 stimulates the expression of genes involved in cholesterol uptake and synthesis, including LDLR and PCSK9. This coordinated response creates a regulatory balance between increasing LDLR production and limiting receptor persistence. Additional influences on PCSK9 expression include hormonal signaling, nutritional conditions, and inflammatory pathways.

Genetic studies have established the importance of PCSK9 in cardiovascular disease. Gain-of-function variants can

cause autosomal dominant hypercholesterolemia by increasing LDLR degradation, whereas loss-of-function variants are associated with reduced LDL-C concentrations and protection against coronary artery disease. These discoveries supported the development of PCSK9-targeted therapies, including monoclonal antibodies that interfere with PCSK9-LDLR binding and small interfering RNA approaches that reduce hepatic PCSK9 production. Beyond cholesterol regulation, PCSK9 continues to be investigated in relation to metabolic disorders, inflammation, and vascular biology. The PCSK9 Antibody provides a reagent for examining the expression and processing of this important regulator of lipoprotein metabolism.

Explore our Metabolism Antibodies collection for additional research antibodies targeting proteins involved in cholesterol homeostasis, lipoprotein metabolism, and cellular lipid regulation.

Application Notes

Optimal dilution of the PCSK9 Antibody / Proprotein Convertase Subtilisin Kexin 9 Antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids S153-Q344) was used as the immunogen for the PCSK9 antibody.

Storage

After reconstitution, the PCSK9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

PCSK9 protein antibody, Proprotein convertase 9 antibody, Proprotein convertase subtilisin/kexin type 9 antibody, Neural apoptosis-regulated convertase 1 antibody, NARC-1 antibody, PC9 antibody, Subtilisin-like proprotein convertase 9 antibody

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