abcam

ab272907

Anti-PCSK9 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7 Preservative: 0.025% Proclin 300 Constituents: PBS, 20% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Polyclonal
Immunogen	Recombinant Fragment Protein within Human PCSK9. The exact immunogen used to generate this antibody is proprietary information. Database link Q8NBP7
Purification technique	Affinity purification Immunogen
Concentration	0.21 - 1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/500 - 1/3000
Notes	-

Species	Rat
Dilution info	1/500 - 1/3000
Notes	-

Target data

See full target information PCSK9

Function

Crucial player in the regulation of plasma cholesterol homeostasis. Binds to low-density lipid receptor family members: low density lipoprotein receptor (LDLR), very low density lipoprotein receptor (VLDLR), apolipoprotein E receptor (LRP1/APOER) and apolipoprotein receptor 2 (LRP8/APOER2), and promotes their degradation in intracellular acidic compartments (PubMed:18039658). Acts via a non-proteolytic mechanism to enhance the degradation of the hepatic LDLR through a clathrin LDLRAP1/ARH-mediated pathway. May prevent the recycling of LDLR from endosomes to the cell surface or direct it to lysosomes for degradation. Can induce ubiquitination of LDLR leading to its subsequent degradation (PubMed:17461796, PubMed:18197702, PubMed:18799458, PubMed:22074827). Inhibits intracellular degradation of APOB via the autophagosome/lysosome pathway in a LDLR-independent manner. Involved in the disposal of non-acetylated intermediates of BACE1 in the early secretory pathway (PubMed:18660751). Inhibits epithelial Na(+) channel (ENaC)-mediated Na(+) absorption by reducing ENaC surface expression primarily by increasing its proteasomal degradation. Regulates neuronal apoptosis via modulation of LRP8/APOER2 levels and related anti-apoptotic signaling pathways.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Proprotein convertase subtilisin/kexin type 9 (PCSK9) is a protein responsible for the regulation of cholesterol levels by binding to low-density lipoprotein receptors (LDLR) on hepatocytes. This interaction marks the LDLRs for degradation reducing the liver's ability to clear LDL cholesterol from the blood. PCSK9 has a molecular weight of approximately 74 kDa. The protein is mainly expressed in the liver but is also found in the intestine and kidneys. PCSK9 is referred to as NARC-1 standing for neural apoptosis-regulated convertase 1 highlighting its role in the liver's cholesterol management system.
Biological function summary	PCSK9 influences cholesterol homeostasis by its important role in degrading LDL receptors. It functions independently rather than as part of larger protein complexes. PCSK9 gains particular interest in therapeutic contexts where its inhibition can lead to increased LDLR levels and enhanced clearance of LDL cholesterol. Biotinylated PCSK9 and mouse PCSK9 variants provide significant tools for experimental study. Kits such as the PCSK9 ELISA kit enable detailed measurement of PCSK9 levels in blood samples providing insights into cholesterol metabolism dynamics.
Pathways	PCSK9 operates within the lipid metabolism pathway and the cholesterol biosynthesis pathway. The protein's activity affects the fate of LDL cholesterol within these pathways. It interacts with proteins such as apolipoprotein B (ApoB) which plays a central role in the structural component of LDL particles. The modulation of these pathways by PCSK9 highlights the significance of its function in maintaining cardiovascular health and managing cholesterol levels.
Associated diseases and disorders	PCSK9 is closely linked to hypercholesterolemia and coronary artery disease. Mutations in PCSK9 can lead to autosomal dominant hypercholesterolemia due to its effect on LDL receptor degradation. Other proteins such as ApoB and LDLR are involved in these conditions tightly interacting with PCSK9's regulatory function. A better understanding of PCSK9's role offers potential therapeutic targets for cardiovascular disease interventions especially through the development of PCSK9 antibodies and PCSK9 assays that adjust cholesterol levels.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

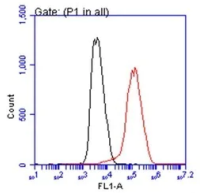
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
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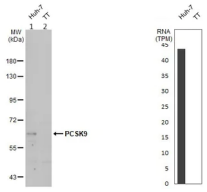
3 product images



Flow Cytometry - Anti-PCSK9 antibody (ab272907)

PCSK9 Flow Cytometry staining of HepG2 cell using rabbit Anti-PCSK9 antibody

Flow cytometry analysis of HepG2 cells detecting PCSK9 using ab272907 at a 1/50 dilution (Red).
Unlabelled sample was used as a control (Black).
Acquisition of 20,000 events were collected for FACS analysis.



Western blot - Anti-PCSK9 antibody (ab272907)

PCSK9 Western blot staining using rabbit Anti-PCSK9 antibody

Samples were separated by 7.5% SDS-PAGE. Corresponding RNA expression data for the same cell lines are based on Human Protein Atlas program.
All lanes:
Western blot - Anti-PCSK9 antibody (ab272907) at 1/1000 dilution

Lane 1:
Huh-7 whole cell extracts at 30 µg

Lane 2:
TT whole cell extracts at 30 µg

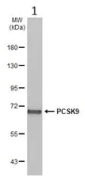
Secondary

All lanes:

HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 74 kDa



Western blot - Anti-PCSK9 antibody (ab272907)

PCSK9 Western blot staining of Rat liver tissue extract using rabbit Anti-PCSK9 antibody

Samples were separated by 7.5% SDS-PAGE.
All lanes:
Western blot - Anti-PCSK9 antibody (ab272907) at 1/1000 dilution

All lanes:
Rat liver tissue extract at 50 µg

Secondary

All lanes:
HRP-conjugated anti-rabbit IgG

Predicted band size: 74 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.