

Anti-PCSK9 [FAP2M21] Standard Size Ab02936-10.0

Isotype and Format: Human IgG1, Lambda

Clone Number: FAP2M21

Alternative Name(s) of Target: NARC1; NARC-1; PC9; Proprotein convertase subtilisin/kexin type; Neural apoptosis-regulated convertase 1; Proprotein convertase 9; Subtilisin/kexin-like protease PC9

UniProt Accession Number of Target Protein: Q8NBP7

Published Application(s): BLI, functional assay, inhibit, therapeutic, Block, ELISA, FC, IF

Published Species Reactivity: Human

Immunogen: The original antibody was generated by panning a fully human scFv phage display library with recombinant human PCSK9. Later on the scFv was transformed into a full length IgG antibody.

Specificity: This antibody specifically binds the module 2 (amino acid residues 530-605) of the C-terminal domain (CTD) of PCSK9. Proprotein convertase subtilisin/kexin type 9 (PCSK9) is a serine protease enzyme encoded by the PCSK9 gene in humans and it plays a role in regulation of circulating cholesterol. It is associated with autosomal dominant hypercholesterolemia, a state of elevated levels of LDL (low-density lipoprotein) cholesterol. Autosomal dominant hypercholesterolemia can result in severe implications such as stroke and coronary heart disease.

Application Notes: This antibody binds human PCSK9 with an extremely slow dissociation rate constant and exert its hypolipidemic effect by blocking PCSK9-LDLR interaction. The binding characterization of this antibody was done using ELISA. Bio-Layer Interferometry (BLI) analysis revealed that the full-length IgG1 antibody FAP2M21 binds to hPCSK9 with a K_D as low as 1.42 nM, and a dramatically slow dissociation rate (k_{off} , $4.68 \times 10^{-6} \text{ s}^{-1}$) (PMID: 33647772). This antibody was also used to analyze LDLR expressed on the surface of HepG2 cells using flow cytometry and immunofluorescence staining. This antibody potently inhibited PCSK9-induced reduction of LDL-C uptake in HepG2 cells, with an EC_{50} of 43.56 nM. When this antibody was injected in C57BL/6 mice expressing human PCSK9, it dose-dependently up-regulated hepatic LDLR levels, and concomitantly reduced serum LDL-C by 3.3% and 37.2%, respectively (PMID: 33647772).

Antibody First Published in: Xu et al. Development of a novel, fully human, anti-PCSK9 antibody with potent hypolipidemic activity by utilizing phage display-based strategy. EBioMedicine. 2021 Mar;65:103250. [PMID:33647772](#)

Note on publication: Describes the generation of this antibody using phage display technology.

Product Form

Size:

200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.