Revision 1

Store at -20C

#55728

PCSK9 (D5K4S) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	65, 80	Rabbit IgG	#Q8NBP7	255738

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

PCSK9 (D5K4S) Rabbit mAb recognizes endogenous levels of total PCSK9 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human PCSK9 protein.

Background

The proprotein convertases (PCs) are enzymes that activate precursor proteins through proteolytic cleavage within the secretory pathway. PCs comprise several enzymes that are basic amino acid-specific proteinases (furin, PC1/3, PC2, PC4, PACE4, PC5/6, and PC7), as well as nonbasic amino acid convertases (S1P and PC9) (1). PCs have a common structure that includes an N-terminal signal peptide for secretory pathway targeting; a pro-domain that is thought to act as an intramolecular chaperone; a catalytic domain containing the active site; a P-domain that contributes to the overall folding of the enzyme by regulating stability, calcium-, and pH-dependence; and a C-terminal domain that interacts with the membrane (2). PCs act in a tissue- and substrate-specific fashion to generate an array of bioactive peptides and proteins from precursors, both in the brain and the periphery (3).
Mutations in the PCSK9 gene (encoding proprotein converts subtilisin/kexin type 9, PC9) have been found to cause autosomal-dominant hypercholesterolemia. PCSK9 was therefore demonstrated to be a key factor involved in lipoprotein metabolism (4). PCSK9 acts as a chaperone protein that binds the LDL receptor (LDLR) at the cell membrane and induces LDLR lysosomal degradation rather than recycling (5). PCSK9 inhibition has since been a new therapeutic strategy for the treatment of hypercholesterolemia (6).

Background References

1. Scamuffa, N. et al. (2006) *FASEB J* 20, 1954-63.
2. Fugère, M. and Day, R. (2005) *Trends Pharmacol Sci* 26, 294-301.
3. Seidah, N.G. and Chrétien, M. (1999) *Brain Res* 848, 45-62.
4. Abifadel, M. et al. (2003) *Nat Genet* 34, 154-6.
5. Cariou, B. et al. (2011) *Atherosclerosis* 216, 258-65.
6. Cohen, J.C. et al. (2006) *N Engl J Med* 354, 1264-72.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

force or effect.

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