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LDLR Rabbit pAb

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Catalog # AP52062

Product Information

Application	WB
Primary Accession	P01130
Reactivity	Human, Mouse
Predicted	Rat, Dog, Pig, Horse, Rabbit, Guinea Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	95376
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human LDL-R
Epitope Specificity	781-860/860
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Single-pass type I membrane protein. Endomembrane system; Single-pass type I membrane protein. Membrane, clathrin-coated pit; Single-pass type I membrane protein. Note=Found distributed from the plasma membrane to intracellular compartments.
SIMILARITY	Belongs to the LDLR family. Contains 3 EGF-like domains. Contains 7 LDL-receptor class A domains. Contains 6 LDL-receptor class B repeats.
SUBUNIT	Interacts with LDLRAP1. Interacts with SNX17. Interacts with HCV E1/E2 heterodimer. Interacts with HIV-1 Tat.
Post-translational modifications	N- and O-glycosylated. Ubiquitinated by MYLIP leading to degradation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The low density lipoprotein receptor (LDLR) gene family consists of cell surface proteins involved in receptor-mediated endocytosis of specific ligands. The encoded protein is normally bound at the cell membrane, where it binds low density lipoprotein/cholesterol and is taken into the cell. Lysosomes release the cholesterol, which is made available for repression of microsomal enzyme 3-hydroxy-3-methylglutaryl coenzyme A (HMG CoA) reductase, the rate-limiting step in cholesterol synthesis. At the same time, a reciprocal stimulation of cholesterol ester synthesis takes place. Mutations in this gene cause the autosomal dominant disorder, familial hypercholesterolemia. Alternate splicing results in multiple transcript variants.[provided by RefSeq, May 2022]

Additional Information

Gene ID	3949

Other Names	Low-density lipoprotein receptor, LDL receptor, LDLR
Target/Specificity	Binds LDL, the major cholesterol-carrying lipoprotein of plasma, and transports it into cells by endocytosis. In order to be internalized, the receptor-ligand complexes must first cluster into clathrin-coated pits. In case of HIV-1 infection, functions as a receptor for extracellular Tat in neurons, mediating its internalization in uninfected cells.
Dilution	WB=1:500-2000,ICC/IF=1:100-500,Flow-Cyt=1 □g/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	LDLR
Function	Binds low density lipoprotein /LDL, the major cholesterol- carrying lipoprotein of plasma, and transports it into cells by endocytosis. In order to be internalized, the receptor-ligand complexes must first cluster into clathrin-coated pits. Forms a ternary complex with PGRMC1 and TMEM97 receptors which increases LDLR-mediated LDL internalization (PubMed:30443021).
Cellular Location	Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P01131}. Membrane, clathrin-coated pit. Golgi apparatus. Early endosome. Late endosome. Lysosome Note=Rapidly endocytosed upon ligand binding. Localized at cell membrane, probably in lipid rafts, in serum-starved conditions (PubMed:30443021).

Background

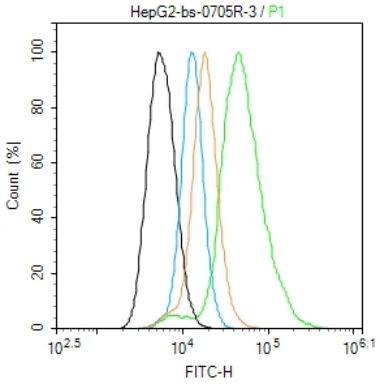
The low density lipoprotein receptor (LDLR) gene family consists of cell surface proteins involved in receptor-mediated endocytosis of specific ligands. The encoded protein is normally bound at the cell membrane, where it binds low density lipoprotein/cholesterol and is taken into the cell. Lysosomes release the cholesterol, which is made available for repression of microsomal enzyme 3-hydroxy-3-methylglutaryl coenzyme A (HMG CoA) reductase, the rate-limiting step in cholesterol synthesis. At the same time, a reciprocal stimulation of cholesterol ester synthesis takes place. Mutations in this gene cause the autosomal dominant disorder, familial hypercholesterolemia. Alternate splicing results in multiple transcript variants.[provided by RefSeq, May 2022]

References

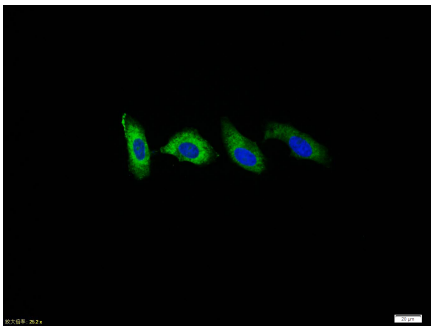
Yamamoto T.,et al.Cell 39:27-38(1984).
Suedhof T.C.,et al.Science 228:815-822(1985).
Jia S.,et al.Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.

Images

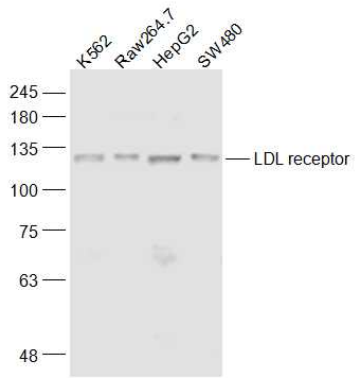
Blank control (black line): HepG2 (black) (The cells were



fixed with 2% paraformaldehyde (10 min) , then permeabilized with PBST for 30 min on room temperature)
Primary Antibody (green line): Rabbit Anti-LDLreceptor antibody (AP52062) ;
Dilution: 1 µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC;Dilution: 1 µg /test.



HepG2 cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (LDL receptor) polyclonal Antibody, Unconjugated (AP52062) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Sample:
K562(Human) Cell Lysate at 30 ug
Raw264.7(Mouse) Cell Lysate at 30 ug
HepG2(Human) Cell Lysate at 30 ug
SW480(Human) Cell Lysate at 30 ug
Primary: Anti-LDL receptor (AP52062) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 92 kD
Observed band size: 120 kD