

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LDL R in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse LDL R is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human LDL R Asp193-Arg788 Accession # P01130
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Blockade of Receptor-ligand Interaction	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

The low density lipoprotein receptor (LDL R) is the founding member of the LDL R family of scavenger receptors. This family contains transmembrane molecules that are characterized by the presence of EGF repeats, complement-like repeats, and YWTD motifs that form β -propellers. Although members of the family were originally thought to be endocytic receptors, it is now clear that some members interact with adjacent cell-surface molecules, expanding their range of activities. Human LDL R is synthesized as an 860 amino acid (aa) precursor that contains a 21 aa signal sequence, a 767 aa extracellular region, a 22 aa transmembrane segment and a 50 aa cytoplasmic tail. The extracellular region is complex. It consists of seven N-terminal complement-like cysteine-rich repeats that bind ligand. Cysteine residues in this region participate in intrachain disulfide bonds. This region is followed by three EGF-like repeats with a β -propeller YWTD containing motif. The EGF-like repeats are responsible for ligand bonding and dissociation. Finally, there is a 50 aa membrane proximal Ser/Thr-rich region that serves as a carbohydrate attachment point. There is extensive O-linked and modest N-linked glycosylation. Thus the receptor's predicted molecular weight of 93 kDa is increased to a native molecular weight of 120 - 160 kDa. Within the 50 aa cytoplasmic tail, there is an NPXY motif that links the receptor to clathrin pits. The extracellular region of human LDL R is 51% aa identical to the extracellular region of human VLDL R, and 79% aa identical to the extracellular region of mouse LDL R. LDL R is constitutively expressed and binds apoB of LDL and apoE of VLDL. It is responsible for clearing 70% of plasma LDL in liver. Mutations in the LDL R gene cause the autosomal dominant disorder, familial hypercholesterolemia.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.