

Product Information



LDL Receptor Polyclonal Antibody

Item No. 10007665 • Lot. No. XXXX

- Synonyms:** LDLR, Low Density Lipoprotein Receptor
- Supplied as:** This vial contains *lot specific* µg of peptide affinity-purified IgG in 500 µl TBS, pH 7.4, containing 50% glycerol, 0.5 mg/ml BSA, and 0.02% sodium azide.
- Host:** Rabbit
- Antigen:** Synthetic peptide from mouse LDL receptor (amino acids 499-511). Homology of the peptide antigen with LDL receptor from other known species:
Mouse SVADTKGVKRRTL
Rat SVADTKGV rRRTL
Human, rhesus monkey, cow, and pig SVADTKGVKRkTL
- Cross-reactivity:** (+) Human, mouse, and rat LDL receptor; other species not tested
- Stability:** ≥1 year at -20°C
- Applications:** Recommended starting dilutions: western blotting: *lot specific* µg/ml; immunocytochemistry: 4 µg/ml; other applications were not attempted and therefore optimal working dilutions should be determined empirically.
- Concentration:** Varies by lot; from 0.2-1.0 mg/ml (100-500 µg/vial). Always 100 ml final working volume for western blotting.

Cholesterol is an essential element of cell membranes and is carried around the body packaged in lipoproteins, primarily low-density lipoproteins (LDLs). The LDL receptors (LDLRs) are cell surface glycoproteins that scavenge LDL from the blood and regulate plasma LDL cholesterol. LDLRs contain five primary domains: the ligand binding domain, the homology with the EGF precursor domain, the O-linked sugars domain, the membrane-spanning region, and a cytoplasmic tail.¹ In humans, more than 60% of the LDL R₃ are found in the liver.² LDLR expression is under hormonal control both *in vivo* and *in vitro*. Mutations in the LDLR gene cause disorders such as familial hypercholesterolemia and atherosclerosis.¹

Mouse LDLR is 864 amino acids in length with an estimated molecular weight of 95 kDa. The protein is highly glycosylated through N- and O-linkages and thus migrates at 100 to 160 kDa bands on SDS-PAGE.² Cayman's LDL receptor polyclonal antibody detects both glycosylated and unglycosylated proteins in tissue/cell samples such as liver, HepG2, and RAW 264.7 cells.

Laboratory Procedures

Immunofluorescent staining of cultured cells

1. Grow cells in 12 or 24 well plates until confluent.
2. Wash cells briefly with TBS, pH 7.4
3. Fix the cells with 1% formaldehyde in TBS, pH 7.4, for 10 minutes.
4. Wash the cells 3 times with TBS, containing 0.1% Triton-X 100 (TBSTX), 10 minutes each.
5. Incubate the cells with 10% normal serum (from the same species in which the secondary antibody is raised) in TBSTX, for 30 minutes.
6. Incubate the cells with the antibody (recommended starting concentration of 4 µg/ml). The optimal working condition should be determined by titration) for 1 hour.
7. Wash the cells 3 times in TBSTX, 10 minutes each.
8. Incubate the cells in the dark for 1 hour with a fluorochrome-conjugated secondary antibody at a concentration recommended by the provider.
9. Wash cells 3 times in TBSTX, 10 minutes each.
10. Examine the staining under a fluorescent microscope with appropriate filter. Store the plate at 4°C in the dark for later analysis.



Lane 1: Rat placenta homogenate (60 µg)
Lane 2: Murine liver homogenate (60 µg)
Lane 3: RAW 264.7 cell lysate (60 µg)

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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Product Information



References

1. Goldstein, J.L., Brown, M.S., Anderson, R.G.W., *et al.* Receptor-mediated endocytosis: Concepts emerging from the LDL receptor system. *Ann. Rev. Cell Biol.* **1**, 1-39 (1985).
2. Rudling, M.J., Reihner, E., Einarsson, K., *et al.* Low density lipoprotein receptor-binding activity in human tissues: Quantitative importance of hepatic receptors and evidence for regulation of their expression *in vivo*. *Proc. Natl. Acad. Sci. USA* **87**, 3469-3473 (1990).

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