

**DESCRIPTION**

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse LDL R in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human LDL R or recombinant mouse LRP-6 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 263123
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse LDL R Ala22-Arg790 (Ala23Val, Cys27Gly) Accession # Q6GTJ9
<b>Conjugate</b>	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	RAW 264.7 mouse monocyte/macrophage cell line

**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> ● 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 (1, 2, 3, 4). This family contains type I 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 (2, 4). Mouse LDL R is synthesized as a 864 amino acid (aa) precursor that contains a 21 aa signal sequence, a 769 aa extracellular region, a 22 aa transmembrane segment and a 52 aa cytoplasmic tail (5). The extracellular region is complex. It consists of seven N-terminal complement-like cysteine-rich repeats (class A LDL domains) that bind LDL. Cysteines in this region participate in intrachain disulfide bonds. This region is followed by two EGF-like domains and six class B LDL repeats that generate a β-propeller whose blades each contain a YWTD motif. This area is likely responsible for ligand dissociation (6). Finally, there is a 50 aa membrane proximal Ser/Thr-rich region that shows extensive O-linked glycosylation, generating a native molecular weight for LDL R of 135 kDa (5). Within the 52 aa cytoplasmic region, there is an NPXY motif that links the receptor to clathrin pits and binds to select adaptor proteins (1, 7, 8). The extracellular region of mouse LDL R shares 78% and 87% aa identity with the extracellular region of human and rat LDL R, respectively. LDL R is constitutively expressed and binds apoB of LDL and apoE of VLDL (9). It is responsible for clearing 70% of plasma LDL in liver (9).

**References:**

1. Strickland, D.K. *et al.* (2002) *Trends Endocrinol. Metab.* **13**:66.
2. Nykjaer, A. and T.E. Willnow (2002) *Trends Cell Biol.* **12**:273.
3. Gent, J. and I. Braakman (2004) *Cell. Mol. Life Sci.* **61**:2461.
4. Bujo, H. and Y. Saito (2006) *Arterioscler. Thromb. Vasc. Biol.* **26**:1246.
5. Hoffer, M.J. V. *et al.* (1993) *Biochem. Biophys. Res. Commun.* **191**:880.
6. Rudenko, G. and J. Deisenhofer (2003) *Curr. Opin. Struct. Biol.* **13**:683.
7. Trommsdorff, M. *et al.* (1998) *J. Biol. Chem.* **273**:33556.
8. Stolt, P.C. and H.H. Bock (2006) *Cell. Signal.* **18**:1560
9. Defesche, J.C. (2004) *Semin. Vasc. Med.* **4**:5.

**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.