

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VLDL R in direct ELISAs and Western blots. In Western blots, this antibody does not cross-react with recombinant human ApoER2.
Source	Monoclonal Rat IgG _{2B} Clone # 268724
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VLDL R Thr25-Ala798 Accession # P98156
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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.

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

VLDL R is a 105 kDa type I integral membrane protein that belongs to the LDL receptor family. It plays a significant role in lipid metabolism and in nervous system development and function (1, 2). Mouse VLDL R has a 770 amino acid (aa) extracellular domain (ECD) and a 54 aa cytoplasmic region. The ECD contains eight LDLR class A repeats, three EGF-like repeats, six LDLR class B repeats, and a juxtamembrane region that is rich in O-linked glycosylation (3, 4). The cytoplasmic domain contains one NPXY internalization motif. VLDL R is predominantly expressed in striated muscle, adipose tissue, brain, and endothelial cells lining capillaries and small arterioles (3-6). VLDL R participates in the tissue uptake of fatty acids from plasma by mediating the internalization of ApoE-containing lipoparticles (i.e. VLDL, β-VLDL, and chylomicron remnants) (5, 7). VLDL R binds and internalizes lipoprotein lipase (LPL) and mediates its transport from the basolateral to the luminal face of endothelial cells (6, 8). VLDL R knockout mice are characterized by reduced LPL activity, reduced serum triglyceride clearance, and a resistance to developing obesity (7, 9, 10). VLDL R influences breast cancer cell motility by mediating the uptake of uPAR-PAI1 complexes (6, 11). Lipoprotein accumulation *via* macrophage VLDL R is instrumental in promoting the formation of atherosclerotic plaques (12). In the nervous system, VLDL R and ApoE R2 interactions with Reelin are critical for neuronal migration and positioning in the developing brain (13). VLDL R also functions in adult hippocampal synapse maturation, synaptic plasticity, and memory formation (14, 15). The ECD of mouse VLDL R shares 95% aa sequence identity with human and rat VLDL R. Within shared regions, mouse VLDL R shares 55% and 53% aa sequence identity with ApoE R2 and LDL R, respectively.

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.