

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 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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

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