R&D SYSTEMS
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Mouse VLDL R Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2258

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VLDL R in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VLDL R Thr25-Ala798 Accession # AAA59384
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

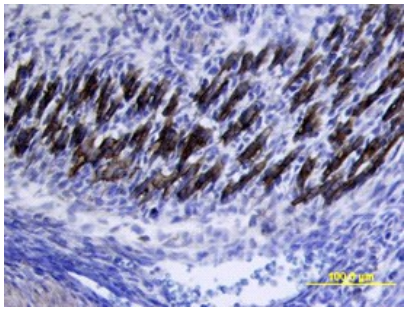
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse VLDL R (Catalog # 2258-VL)
Immunohistochemistry	5-15 µg/mL	See Below

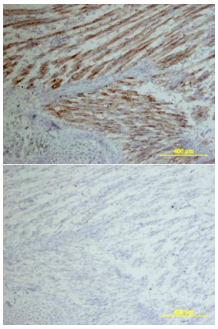
DATA

Immunohistochemistry



VLDL R in Mouse Embryo. VLDL R was detected in immersion fixed frozen sections of mouse embryo using Mouse VLDL R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2258) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counter-stained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

Immunohistochemistry



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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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 lumenal 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.

References:

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