Mouse LRPAP Alexa Fluor® 405-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4480V
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse LRPAP in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human LRPAP is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse LRPAP Gln29-Leu360 Accession # P55302
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

LRPAP (LDL receptor-related protein-associated protein 1; also named RAP) is a ubiquitously expressed 39 kDa molecular chaperone for LDL receptor family proteins (1, 2). Mature mouse LRPAP is 332 amino acids (aa) in length and secreted into the ER/Golgi of the cell. It shares 77% and 97% aa sequence identity with human and rat LRPAP, respectively. LRPAP contains three approximately 100 aa α-helical domains (D1-D3). The D1 domain contains a low affinity binding site for LRP, and the associated D2 and D3 domains bind LRP with high affinity (4). Domains D2 and D3 interact with each other, while D1 is independent (3). The majority of LRPAP is localized in the endoplasmic reticulum and Golgi (5). LRPAP prevents the premature interaction of LRP, LRP2/megalin, and VLDLR with their co-expressed ligands, thereby promoting proper receptor folding and export from the ER (6-8). Protonation of conserved histidine residues within the D3 domain induces the separation of LRPAP and LRP in the relatively acidic Golgi (9). LRPAP, which contains a C-terminal HNEL motif, can then recycle to the ER (9). A minor amount of LRPAP remains associated with LRP and can modulate receptor activity on the cell surface (5). Exogenously applied LRPAP competitively inhibits LDL receptor family binding and uptake of activated α2-macroglobulin, apoB100- or apoE-enriched LDL and VLDL particles, cholesteryl esters, and complexes of PAI-1 with either tPA or uPA (10-14).

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