Recombinant Protein Technical Manual

Recombinant Human LRPAP1/A2MRAP Protein (His Tag)(Active)

RPES3580

Product Data:

Product SKU: RPES3580

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_002328.1

Protein Information:

Molecular Mass:	39.2 kDa
AP Molecular Mass:	43 kDa
Tag:	C-His
Bio-activity:	Measured by its binding ability in a functional ELISA. Immobilized human LRPAP1 at 0.5 µg/ml can bind human VLDLR with a range of 3.2-400 ng/ml.
Purity:	> 92 % as determined by reducing SDS-PAGE.
Endotoxin:	< 1.0 EU per µg as determined by the LAL method.
Storage:	Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping:	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation:	Lyophilized from sterile PBS, pH 7.4
Reconstitution:	Please refer to the printed manual for detailed information.
Application:	Functional ELISA
Synonyms:	A2MRAP;A2RAP;alpha-2-MRAP;HBP44;MRAP;MYP23;RAP

Immunogen Information:

Sequence: Tyr 35-Leu 357

Background:

Receptor-associated protein (RAP) is a molecular chaperone for low density lipoprotein receptor-related protein (LRP), which plays a key role in cholesterol metabolism. The lipoprotein receptor-related protein (LRP) is an endocytic receptor for several ligands, such as alpha2-macroglobulin (alpha2 M) and apolipoprotein E. LRP is involved in the clearance of lipids from the bloodstream and is expressed in the atherosclerotic plaque. The LRP-associated protein (LRPAP in humans, RAP in mice) acts as a chaperone protein, stabilizing the nascent LRP peptide in the endoplasmic reticulum and Golgi complex. Alpha-2-macroglobulin receptor-associated protein, also known as low density lipoprotein receptor-related protein-associated protein 1, RAP and LRPAP1, is a 39 kDa protein and a member of the alpha-2-MRAP family. It is a receptor antagonist that interacts with several members of the low density lipoprotein (LDL) receptor gene family. Upon binding to these receptors, LRPAP1 inhibits all ligand interactions with the receptors. LRPAP1 is present on cell surface forming a complex with the alpha-2-macroglobulin receptor heavy and light chains. It binds with LRP1B and the binding is followed by internalization and degradation. LRPAP1 interacts with LRP1/alpha-2-macroglobulin receptor and LRP2 (previously called glycoprotein 330), and may be involved in the pathogenesis of membrane glomerular nephritis. LRPAP1 together with LRP2 forms the Heymann nephritis antigenic complex. LRP2 is expressed in epithelial cells of the thyroid, where it can serve as a receptor for the protein thyroglobulin. Intron 5 insertion/deletion polymorphism of RAP gene (LRPAP1) has been implicated in other diseases sharing etiology with gallstone disease (GSD). The LRPAP1 insertion/deletion polymorphism influences cholesterol homeostasis and may confer risk for gallstone disease and gallbladder carcinoma (GBC) incidence usually parallels with the prevalence of cholelithiosis. The genetic variations at the LRPAP1 locus may modulate Alzheimer disease (AD) phenotype beyond risk for disease. In addition, the variation at the LRPAP1 gene could contribute to the risk of developing an early episode of myocardial infarction (MI).