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ApoER2 Rabbit pAb

Catalog # AP97364

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q14114
Other Accession	Q14114
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	105634
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ApoER2
Epitope Specificity	851-963/963
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the LDLR family. Contains 2 EGF-like domains. Contains 7 LDL-receptor class A domains.
SUBUNIT	Reelin associates with two or more receptor molecules. Interacts with DAB1 and JNK-interacting proteins. Interacts with SNX17 (By similarity).
Post-translational modifications	O-glycosylated. Some alternatively spliced isoforms lack the O-linked sugar domain. Undergoes sequential, furin and gamma-secretase dependent, proteolytic processing, resulting in the extracellular release of the entire ligand-binding domain as a soluble polypeptide and in the intracellular domain (ICD) release into the cytoplasm. The gamma-secretase-dependent proteolytical processing occurs after the bulk of the extracellular domain has been shed, in a furin-dependent manner, in alternatively spliced isoforms carrying the furin cleavage site. Hypoglycosylation (mainly hypo-O-glycosylation) leads to increased extracellular cleavage, which in turn results in accelerating release of the intracellular domain (ICD) by the gamma-secretase. The resulting receptor fragment is able to inhibit Reelin signaling and in particular the Reelin-induced DAB1 phosphorylation. Tyrosine phosphorylated upon apoE binding. Ubiquitinated by MYLIP leading to degradation.
DISEASE	Defects in LRP8 are a cause of myocardial infarction type 1 (MCI1) [MIM:608446]. A condition defined by the irreversible necrosis of heart muscle secondary to prolonged ischemia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Cell surface receptor for Reelin (RELN) and apolipoprotein E (apoE)-containing ligands. LRP8 participates in transmitting the extracellular Reelin signal to intracellular signaling processes, by binding to DAB1 on its cytoplasmic tail. Reelin acts via both the VLDL receptor (VLDLR) and LRP8 to regulate DAB1 tyrosine phosphorylation and microtubule function in neurons. LRP8 has higher affinity for Reelin than VLDLR. LRP8 is thus a key component of the Reelin pathway which governs neuronal layering of the forebrain during embryonic brain development. Binds the endoplasmic reticulum resident

receptor-associated protein (RAP). Binds dimers of beta 2-glycoprotein I and may be involved in the suppression of platelet aggregation in the vasculature. Highly expressed in the initial segment of the epididymis, where it affects the functional expression of clusterin and phospholipid hydroperoxide glutathione peroxidase (PHGPx), two proteins required for sperm maturation. May also function as an endocytic receptor.

Additional Information

Gene ID	7804
Other Names	APOER2; HSZ75190; LRP-8; MCI1; 4932703M08Rik; Lr8b; LRP8_HUMAN; LRP8; Apolipoprotein E receptor 2; LRP8_MOUSE; LDL receptor related protein 8; low density lipoprotein receptor-related protein 8, apolipoprotein e receptor
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	LRP8
Synonyms	APOER2
Function	Cell surface receptor for Reelin (RELN) and apolipoprotein E (apoE)-containing ligands (PubMed:12899622, PubMed:12950167, PubMed:20223215, PubMed:30873003). LRP8 participates in transmitting the extracellular Reelin signal to intracellular signaling processes, by binding to DAB1 on its cytoplasmic tail (By similarity). Reelin acts via both the VLDL receptor (VLDLR) and LRP8 to regulate DAB1 tyrosine phosphorylation and microtubule function in neurons (By similarity). LRP8 has higher affinity for Reelin than VLDLR (By similarity). LRP8 is thus a key component of the Reelin pathway which governs neuronal layering of the forebrain during embryonic brain development (By similarity). Binds the endoplasmic reticulum resident receptor- associated protein (RAP) (By similarity). Binds dimers of beta 2-glycoprotein I and may be involved in the suppression of platelet aggregation in the vasculature (PubMed:12807892). Highly expressed in the initial segment of the epididymis, where it affects the functional expression of clusterin and phospholipid hydroperoxide glutathione peroxidase (PHGPx), two proteins required for sperm maturation (By similarity). May also function as an endocytic receptor (By similarity). Not required for endocytic uptake of SEPP1 in the kidney which is mediated by LRP2 (By similarity). Together with its ligand, apolipoprotein E (apoE), may indirectly play a role in the suppression of the innate immune response by controlling the survival of myeloid- derived suppressor cells (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Secreted {ECO:0000250|UniProtKB:Q924X6}. Note=Isoforms that contain the exon coding for a furin-type cleavage site are proteolytically processed, leading to a secreted receptor fragment {ECO:0000250|UniProtKB:Q924X6}
Tissue Location	Expressed mainly in brain and placenta. Also expressed in platelets and megakaryocytic cells. Not expressed in the liver.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.