

KIRREL1 Rabbit pAb

Catalog # AP97222

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q8IZU9
Other Accession	Q8IZU9
Predicted	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	85255
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KIRREL1/NEPH1
Epitope Specificity	301-400/757
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 immunoglobulin superfamily. Contains 5 Ig-like C2-type (immunoglobulin-like) domains.
SUBUNIT	Interacts with the C-terminus of NPHS2/podocin. Interacts with CASK.
Post-translational modifications	Phosphorylation probably regulates the interaction with NSH2. Phosphorylated at Tyr-605 and Tyr-606 by FYN, leading to GRB2 binding (By similarity).N-glycosylated (By similarity).
DISEASE	Note=A chromosomal aberration involving KIRREL3 and CDH15 is found in a patient with severe mental retardation and dysmorphic facial features. Translocation t(11;16)(q24.2;q24). Defects in KIRREL3 are the cause of mental retardation autosomal dominant type 4 (MRD4) [MIM:612581]. Mental retardation is characterized by significantly sub-average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	NEPH2 is a 778 amino acid single-pass type I membrane protein that belongs to the nephrin-like protein family and immunoglobulin superfamily. Expressed in both fetal and adult brain, as well as podocytes of kidney glomeruli, NEPH2 contains five Ig-like C2-type (immunoglobulin-like) domains and is thought to play a role in the hematopoietic supportive capacity of stroma cells. NEPH2 undergoes alternative splicing to produce two isoforms and contains a C-terminal cytoplasmic domain which it uses to interact with Podocin, a podocyte protein involved in ultrafiltration. Defects in the gene encoding NEPH2 are associated with mental retardation autosomal dominant type 4 (MRD4).

Additional Information

Gene ID 84623

Other Names	KIRRE; MRD4; NEPH2; PRO4502; 1500010O20Rik; 2900036G11Rik; SST4; mKIAA1867; KIRR3_HUMAN; KIRREL3; Kin of irregular chiasm-like protein 3; Nephlin-like protein 2; KIAA1867; KIRR3_MOUSE; mKirre; kirre like nephlin family adhesion molecule 3; kin of IRRE like 3 (Drosophila)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	KIRREL3 (HGNC:23204)
Function	Synaptic adhesion molecule required for the formation of target-specific synapses. Required for formation of target-specific synapses at hippocampal mossy fiber synapses. Required for formation of mossy fiber filopodia, the synaptic structures connecting dentate granule and GABA neurons. Probably acts as a homophilic adhesion molecule that promotes trans-cellular interactions and stabilize mossy fiber filopodia contact and subsequent synapse formation. Required for the coalescence of vomeronasal sensory neuron axons. May be involved in the hematopoietic supportive capacity of stroma cells; the secreted extracellular domain is directly responsible for supporting hematopoietic stem cells.
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Expressed in fetal and adult brain (PubMed:19012874). Also expressed in kidney, specifically in podocytes of kidney glomeruli (PubMed:12424224). Also expressed in skeletal muscle (PubMed:25488023).

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