

KIRREL3 Antibody

Catalog # ASC11855

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8IZU9
Other Accession	NP_115920 , 26006461
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	85255
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KIRREL3 antibody can be used for detection of KIRREL3 by Western blot at 1 - 2 μ g/ml. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	84623
Other Names	Kin of IRRE-like protein 3, Kin of irregular chiasm-like protein 3, Nephrin-like protein 2, KIRREL3, KIAA1867, NEPH2
Target/Specificity	KIRREL3; KIRREL3 antibody is human, mouse and rat reactive. At least two isoforms are known to exist; this antibody will detect both isoforms. KIRREL3 antibody is predicted to not cross-react with other members of the KIRREL protein family.
Reconstitution & Storage	KIRREL3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	KIRREL3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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).

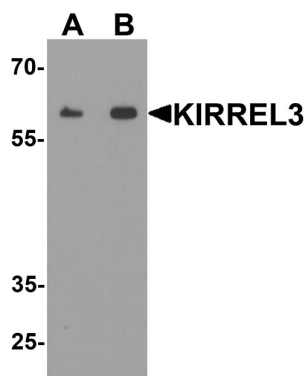
Background

KIRREL3, also known as nephrin-like protein 2, is a type I transmembrane protein belonging to a family of three podocin interacting proteins and the immunoglobulin superfamily (1). KIRREL3 is involved in the regulation of both glomerular and neural development (2), and more specifically, the nucleogenesis of the pontine nuclei in the developing hindbrain (3). KIRREL3 has also been shown to interact with the synaptic scaffold protein calmodulin-associated serine/threonine kinase (CASK) in neuronal cells (4).

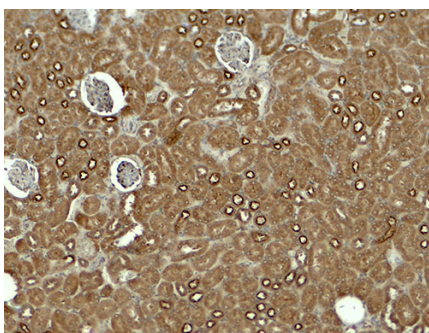
References

- Sellin L, Huber TB, Gerke P, et al. NEPH1 defines a novel family of podocin interacting proteins. *FASEB J.* 2003; 17:115-7.
- Neumann-Haefelin E, Kramer-Zucker A, Slanchev K, et al. A model organism approach: defining the role of Neph proteins as regulators of neuron and kidney morphogenesis. *Hum. Mol. Genet.* 2010; 19:2347-59.
- Nishida K, Nakayama K, Yoshimura S, et al. Role of Neph2 in pontine nuclei formation in the developing hindbrain. *Mol. Cell Neurosci.* 2011; 46:662-70.
- Mizuhara E, Minaki Y, Nakatani T, et al. Purkinje cells originate from cerebellar ventricular zone progenitors positive for Neph3 and E-cadherin. *Dev. Biol.* 2010; 338:202-14.

Images

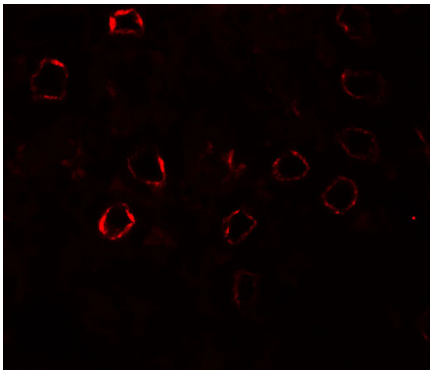


Western blot analysis of KIRREL3 in mouse kidney tissue lysate with KIRREL3 antibody at (A) 1 and (B) 2 μ g/ml.



Immunohistochemistry of KIRREL3 in mouse kidney tissue with KIRREL3 antibody at 5 μ g/ml.

Immunofluorescence of KIRREL3 in mouse kidney tissue with KIRREL3 antibody at 20 μ g/ml.



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