

LRRTM2 Antibody

Catalog # ASC11275

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O43300
Other Accession	EAW62125 , 7662102
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	59076
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LRRTM2 antibody can be used for detection of LRRTM2 by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

Additional Information

Gene ID	26045
Other Names	Leucine-rich repeat transmembrane neuronal protein 2, Leucine-rich repeat neuronal 2 protein, LRRTM2, KIAA0416, LRRN2
Target/Specificity	LRRTM2; LRRTM2 antibody is predicted to not cross-react with other LRRTM family members.
Reconstitution & Storage	LRRTM2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LRRTM2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LRRTM2
Synonyms	KIAA0416, LRRN2
Function	Involved in the development and maintenance of excitatory synapses in the vertebrate nervous system. Regulates surface expression of AMPA receptors and instructs the development of functional glutamate release sites. Acts as a ligand for the presynaptic receptors NRXN1-A and NRXN1-B (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Postsynaptic cell

membrane; Single-pass type I membrane protein. Note=Localized to excitatory synapses

Tissue Location

Expressed in neuronal tissues.

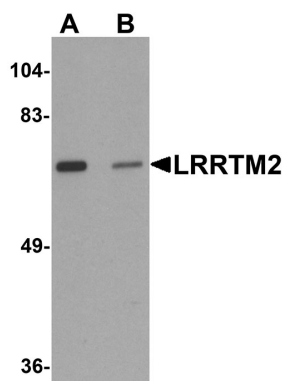
Background

LRRTM2 Antibody: The Leucine-rich repeat transmembrane neuronal proteins (LRRTMs) are differentially expressed in the nervous system and were recently found to instruct presynaptic and mediate postsynaptic glutamatergic differentiation, with LRRTM1 and LRRTM2 most potent at inducing presynaptic differentiation. Each LRRTM protein is a type I transmembrane containing ten extracellular leucine-rich repeats and a short intracellular tail and has a developmentally regulated pattern distinct from all others. LRRTM2 interacts with PSD-95 and regulates the surface expression of AMPA receptors. LRRTM2 also functions as a neuroligin ligand, binding both Neuroligin 1- α and - β , suggesting that LRRTM2-Neuroligin1 interaction plays a critical role in regulatory excitatory synapse development.

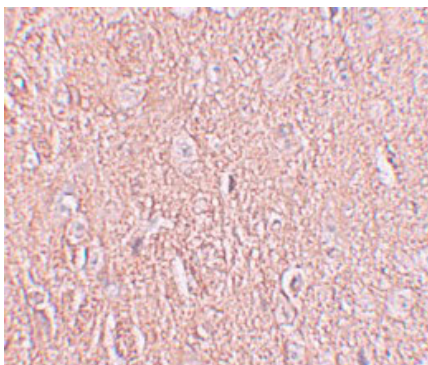
References

Lauren J, Airaksinen MS, Saarma M, et al. A novel gene family encoding leucine-rich repeat transmembrane protein differentially expressed in the nervous system. *Genomics* 2003; 81:411-21.
Linhoff MW, Lauren J, Cassidy RM, et al. An unbiased expression screen for synaptogenic proteins identifies the LRRTM protein family as synaptic organizers. *Neuron* 2009; 61:734-49.
Siddiqui TJ, Pancaroglu R, Kang Y, et al. LRRTMs and neuroligins bind neuroligins with a differential code to cooperate in glutamate synapse development. *J. Neurosci.* 2010; 30:7495-506.
Ko J, Fuccillo MV, Malenka RC, et al. LRRTM2 functions as a neuroligin ligand in promoting excitatory synapse formation. *Neuron* 2009; 64:791-8.

Images

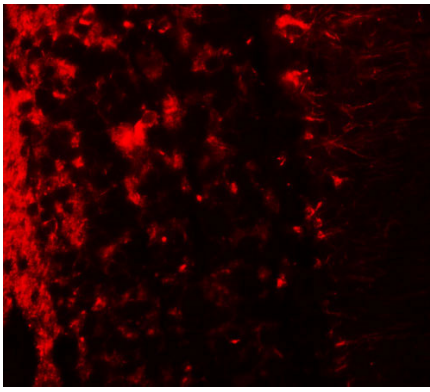


Western blot analysis of LRRTM2 in SK-N-SH cell lysate with LRRTM2 antibody at 1 μ g/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of LRRTM2 in human brain tissue with LRRTM2 antibody at 2.5 μ g/mL.

Immunofluorescence of LRRTM2 in human brain tissue with LRRTM2 antibody at 20 μ g/mL.



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