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LRRTM4 Antibody

Catalog # ASC11277

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q86VH4
Other Accession	NP_001128217, 156139147
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	67217
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LRRTM4 antibody can be used for detection of LRRTM4 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	80059
Other Names	Leucine-rich repeat transmembrane neuronal protein 4, LRRTM4
Target/Specificity	LRRTM4; At least two isoforms of LRRTM4 are known to exist; this antibody will both isoforms. LRRTM4 antibody is predicted to not cross-react with other LRRTM family members.
Reconstitution & Storage	LRRTM4 antibody can be stored at 4℃ for three months and -20℃, 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	LRRTM4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LRRTM4
Function	May play a role in the development and maintenance of the vertebrate nervous system. Exhibits strong synaptogenic activity, restricted to excitatory presynaptic differentiation (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Postsynaptic cell membrane; Single-pass type I membrane protein
Tissue Location	Expressed in neuronal tissues.

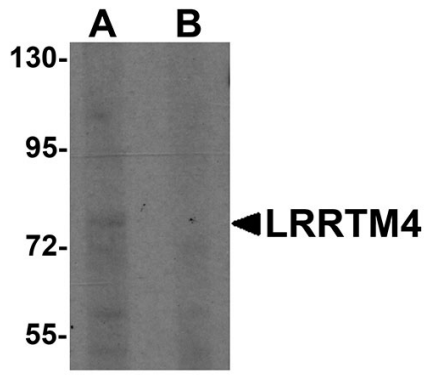
Background

LRRTM4 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. Little is known about the function of LRRTM4; in mouse, it is expressed in the limb mesenchyme, neural tube, caudal mesoderm and in three distinct regions of the head. Later expression occurs in a subset of the developing sclerotome. Its similarity to other LRRTM family members suggests that LRRTM4 may also play a role in the development and maintenance of the vertebrate nervous system.

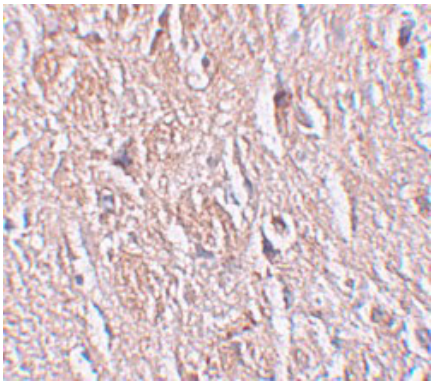
References

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 neurexins with a differential code to cooperate in glutamate synapse development. J. Neurosci. 2010; 30:7495-506.
Haines BP and Rigby PW. Developmentally regualted expression of the LRRTM gene family during mid-gestation mouse embryogenesis. Gene Expr. Patterns 2007; 7:23-9.

Images

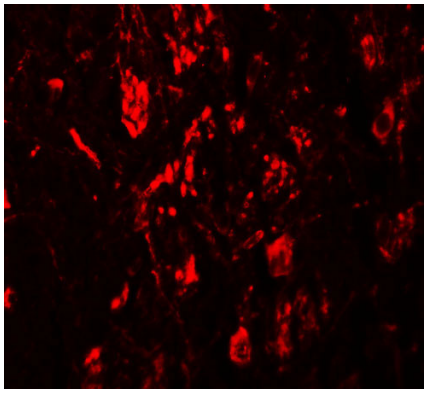


Western blot analysis of LRRTM4 in HeLa cell lysate with LRRTM4 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of LRRTM4 in human brain tissue with LRRTM4 antibody at 2.5 µg/mL.

Immunofluorescence of LRRTM4 in human brain tissue with LRRTM4 antibody at 20 µg/mL.



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