

# LRRTM1 Antibody

Catalog # ASC11274

## Product Information

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| <b>Application</b>           | WB, IF, E, IHC-P                                                                                                                                                                                                 |
| <b>Primary Accession</b>     | <a href="#">Q86UE6</a>                                                                                                                                                                                           |
| <b>Other Accession</b>       | <a href="#">AAH45113</a> , <a href="#">86990456</a>                                                                                                                                                              |
| <b>Reactivity</b>            | Human, Mouse, Rat                                                                                                                                                                                                |
| <b>Host</b>                  | Rabbit                                                                                                                                                                                                           |
| <b>Clonality</b>             | Polyclonal                                                                                                                                                                                                       |
| <b>Isotype</b>               | IgG                                                                                                                                                                                                              |
| <b>Calculated MW</b>         | 58641                                                                                                                                                                                                            |
| <b>Concentration (mg/ml)</b> | 1 mg/mL                                                                                                                                                                                                          |
| <b>Conjugate</b>             | Unconjugated                                                                                                                                                                                                     |
| <b>Application Notes</b>     | LRRTM1 antibody can be used for detection of LRRTM1 by Western blot at 1 $\mu$ g/mL. Antibody can also be used for immunohistochemistry starting at 5 $\mu$ g/mL. For immunofluorescence start at 20 $\mu$ g/mL. |

## Additional Information

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| <b>Gene ID</b>                      | 347730                                                                                                                                                                                                                                         |
| <b>Other Names</b>                  | Leucine-rich repeat transmembrane neuronal protein 1, LRRTM1                                                                                                                                                                                   |
| <b>Target/Specificity</b>           | LRRTM1; LRRTM1 antibody is predicted to not cross-react with other LRRTM family members.                                                                                                                                                       |
| <b>Reconstitution &amp; Storage</b> | LRRTM1 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. |
| <b>Precautions</b>                  | LRRTM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                                                                              |

## Protein Information

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| <b>Name</b>              | LRRTM1                                                                                                                                   |
| <b>Function</b>          | Exhibits strong synaptogenic activity, restricted to excitatory presynaptic differentiation, acting at both pre- and postsynaptic level. |
| <b>Cellular Location</b> | Cell membrane; Single-pass type I membrane protein. Postsynaptic cell membrane; Single-pass type I membrane protein                      |
| <b>Tissue Location</b>   | Predominantly expressed in forebrain regions including thalamus and cerebral cortex.                                                     |

## Background

**LRRTM1 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. LRRTM1 is a maternally suppressed gene that is associated paternally with handedness and schizophrenia.

## References

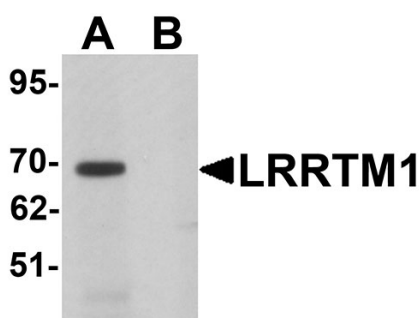
Lauren J, Airaksinen MS, Saarma M, et al. A novel gene family encoding leucine-rich repeat transmembrane protein differentially expressed in the nervous system. *Genomics* 2003; 81:411-21.

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.

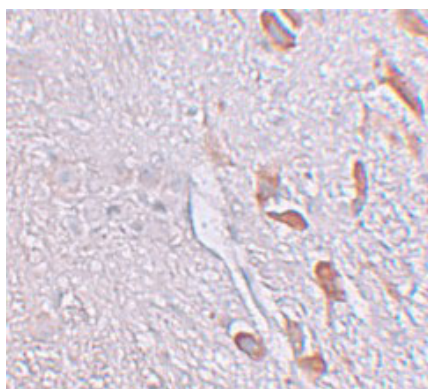
Siddiqui TJ, Pancaroglu R, Kang Y, et al. LRRTMs and neuroligins bind neuroligins with a differential code to cooperate in glutamate synapse development. *J. Neurosci.* 2010; 30:7495-506.

Haines BP and Rigby PW. Developmentally regulated expression of the LRRTM gene family during mid-gestation mouse embryogenesis. *Gene Expr. Patterns* 2007; 7:23-9.

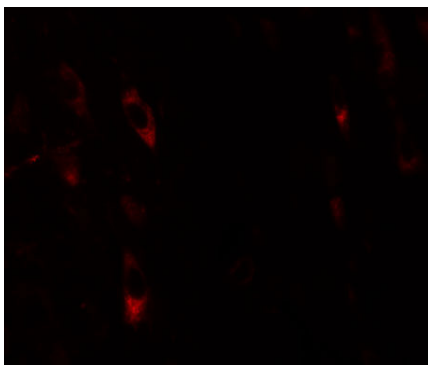
## Images



Western blot analysis of LRRTM1 in mouse brain tissue lysate with LRRTM1 antibody at 1  $\mu\text{g/mL}$  in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of LRRTM1 in human brain tissue with LRRTM1 antibody at 5  $\mu\text{g/mL}$ .



Immunofluorescence of LRRTM1 in human brain tissue with LRRTM1 antibody at 20  $\mu\text{g/mL}$ .

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