

**DESCRIPTION**

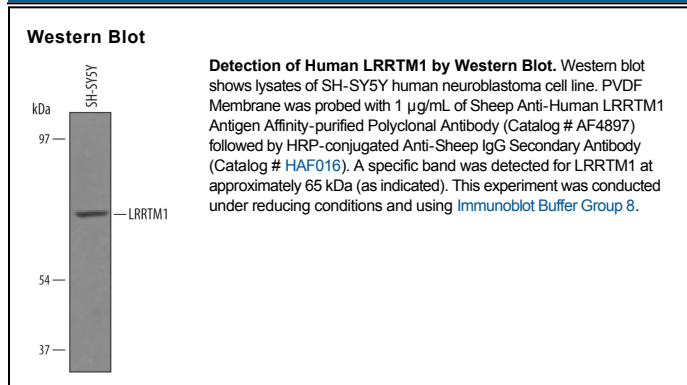
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human LRRTM1 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross reactivity with recombinant human (rh) LRRTM2 is observed, and less than 5% cross reactivity rhLRRTM3 and rhLRRTM4 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human LRRTM1 Ala35-Ile425 Accession # Q86UE6
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Human LRRTM1 (leucine-rich repeat transmembrane neuronal 1) is a 58-59 kDa (predicted) type I transmembrane protein, that belongs to the LRRTM family of proteins within the leucine-rich repeat (LRR) superfamily (1). It is synthesized as a precursor with a 34 amino acid (aa) signal sequence, a 393 aa luminal region, a 21 aa transmembrane region, and a 74 aa cytoplasmic region. The luminal portion of LRRTM1 contains three N-linked glycosylation sites and 10 LRRs flanked by cysteine-rich domains (1). The cytoplasmic region contains several tyrosine, serine, and threonine residues that have potential to be phosphorylated and thus to be involved in signal transduction (1). The C-terminal also contains a conserved glutamic acid-cysteine-glutamic acid-valine sequence for potential interaction with PDZ proteins (1-2). Mature human LRRTM1 is 97% aa identical to mouse LRRTM1. LRRTM1 is localized to the endoplasmic reticulum (3). In the mouse, beginning at 9dpc, low levels of LRRTM1 can be detected in the overlying ectoderm of the limb bud, dorsal otic vesicle, forebrain, midbrain, hindbrain, and in neural progenitors in the central neural tube (2). In the adult brain, it is highly expressed in the brain and salivary gland, and is detected at intermediate levels in the cerebellum, spinal chord, stomach, testis, and uterus (1). Functionally, LRRTM1 may be involved in the formation of the CNS and maintenance of CNS structure and function in the adult brain (1). In addition, LRRTM1 has been shown to be a maternally suppressed gene that is associated paternally with handedness and schizophrenia (3).

**References:**

1. Lauren, J. *et al.* (2003) *Genomics* **81**:411.
2. Haines, B.P. and P.W.J. Rigby (2007) *Gene Expr. Patterns* **7**:23.
3. Francks, C. *et al.* (2007) *Mol. Psychiatry* **12**:1129.