

# **Product** Data Sheet

# LRRTM4 Protein, Mouse (HEK293, His)

Cat. No.: HY-P77069

Synonyms: Leucine-rich repeat transmembrane neuronal protein 4

Species: **HEK293** Source:

Accession: Q80XG9 (Q31-K424)

Gene ID: 243499

**Molecular Weight:** Approximately 46.4 kDa.

## **PROPERTIES**

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

#### **DESCRIPTION**

#### Background

The LRRTM4 protein appears to play a crucial role in the development and maintenance of the vertebrate nervous system, exhibiting robust synaptogenic activity that is specifically limited to excitatory presynaptic differentiation. LRRTM4 is peripherally associated with the AMPAR complex, a complex structure consisting of an inner core comprising four poreforming GluA/GRIA proteins and four major auxiliary subunits, arranged in a twofold symmetry. The intricate composition of the AMPAR complex involves distinct binding sites occupied by various auxiliary subunits, including LRRTM4. These subunits, both in the inner and outer core, serve as a platform that controls the gating, pharmacology, biogenesis, and protein processing of the AMPAR complex. LRRTM4, acting alone or in combination with other subunits, contributes to the modulation of AMPAR complex function, highlighting its significance in shaping synaptic processes and neural connectivity within the vertebrate nervous system. Further elucidation of LRRTM4's specific interactions and functional consequences within the AMPAR complex could provide valuable insights into its role in synaptic regulation.

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 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$ 

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