Data Sheet (Cat.No.TMPY-04856)

TargetMol

LRRTM2 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	leucine rich repeat transmembrane neuronal 2
Protein Construction:	A DNA sequence encoding the human LRRTM2 (NP_056379.1) (Met1-Arg422) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Cys 34
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O43300
Molecular Weight:	71.2 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

LRRTM2 (Leucine-Rich Repeat Transmembrane Neuronal 2) is a Protein Coding gene. LRRTM2 belongs to the LRRTM family and is a key regulator of excitatory synapse development and function. It localizes to excitatory synapses in transfected hippocampal neurons, and shRNA-mediated knockdown of LRRTM2 leads to a decrease in excitatory synapses without affecting inhibitory synapses. LRRTM2 interacts with PSD-95 and regulates surface expression of AMPA receptors, and lentivirus-mediated knockdown of LRRTM2 in vivo decreases the strength of evoked

excitatory synaptic currents. LRRTM2 induces only excitatory synapses, and that it also acts to induce synapses in transfected neurons similarly to neuroligin-1. Diseases associated with LRRTM2 include Tarp Syndrome and Histrionic Personality Disorder.

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