Recombinant Human LRRTM3 Fc Chimera

Catalog Number: 11357-LR

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human LRRTM3 protein

Human LRRTM3 (Glu31-Lys419) Accession # Q86VH5.2	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Glu31
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	71 kDa

SPECIFICATIONS

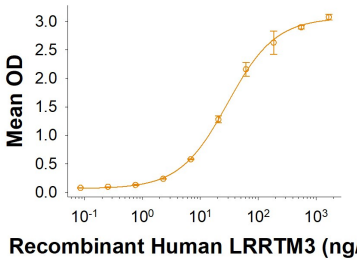
SDS-PAGE	76-93 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human APP/Protease Nexin II (Catalog # 3466-PI) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human LRRTM3 Fc Chimera (Catalog # 11357-LR) binds with an ED_{50} of 8.00-96.0 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

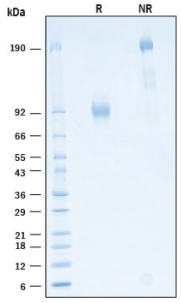
DATA

Binding Activity



Recombinant Human LRRTM3 Fc Chimera Protein Binding Activity. When Recombinant Human APP/Protease Nexin II (Catalog # 3466-PI) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human LRRTM3 Fc Chimera Protein (Catalog # 11357-LR) binds with an ED_{50} of 8.00-96.0 ng/mL.

SDS-PAGE



Recombinant Human LRRTM3 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human LRRTM3 Fc Chimera Protein (Catalog # 11357-LR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 76-93 kDa and 150-190 kDa, respectively.

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Human LRRTM3 Fc Chimera

Catalog Number: 11357-LR

BACKGROUND

Human LRRTM3 (leucine-rich repeat transmembrane neuronal 3) is a 63 kDa (predicted) type I transmembrane protein, and one of four members of the LRRTM family of proteins within the leucine-rich repeat (LRR) superfamily (1). There are two isoforms of LRRTM3. Isoform 1 is synthesized as a precursor with a 30 amino acid (aa) signal sequence, a 389 aa extracellular region, a 21 aa transmembrane region, and a 141 aa cytoplasmic region. In isoform 2, aa 513 is changed from isoleucine to valine, and aa 514 to 581 are missing, producing a cytoplasmic region of only 74 aa. The extracellular region of both isoforms contains one N-linked glycosylation site, a leucine-rich repeat N-terminal domain bordered by four conserved cysteines, and 10 LRRs flanked by cysteine-rich domains (1). The cytoplasmic region of both isoforms contains several tyrosine, serine, and threonine residues that have the potential to be phosphorylated, and thus to be involved in signal transduction (1). The C-terminal of isoform 2 also contains a conserved glutamic acid-cysteine-glutamic acid-valine sequence for potential interaction with PDZ proteins (1 - 2). Mature human LRRTM3 (isoform 1) is 98% identical to mouse LRRTM3. In the mouse, beginning at 8.5 d*pc*, strong levels of LRRTM3 can be detected in the neural progenitors of the neural plate that will develop into the rostral neural tube, the forebrain, a stripe in the hindbrain, and the region of the presomitic mesoderm/somite boundary (2). By 15 d*pc*, LRRTM3 is expressed broadly and accumulates thereafter (3). In the adult, LRRTM3 is expressed almost exclusively in the brain with high expression in the cortical laminae and dentate gyrus, as well as detectable levels in the hypothalamus and amygdala (3). Functionally, LRRTM3 may be involved in the formation of the CNS and maintenance of CNS structure and function in the adult brain (1). In addition, LRRTM3 has been shown to promote processing of amyloid-precursor protein by BACE1, and is a positional candidate gene for late-onset Alzheimer's disease (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. Majercak, J. *et al.* (2006) Proc. Natl. Acad. U.S.A. **103**:17967.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449