Recombinant Human LRRC4 Fc Chimera

Catalog Number: 9375-LR

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived

Human LRRC4 (Ala39-Lys527) Accession # Q9HBW1	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ala39
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	81 kDa

SPECIFICATIONS

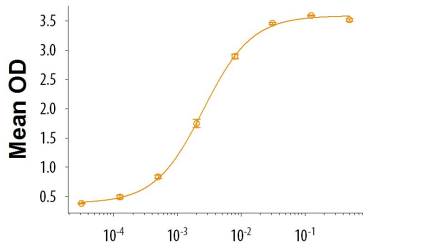
SDS-PAGE	91-127 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse Netrin-G2a Fc Chimera (Catalog # 2744-NG) is coated at 1 µg/mL, Recombinant Human LRRC4 Fc Chimera (Catalog # 9375-LR) binds with an ED_{50} = 2-12 ng/mL.
Endotoxin Level	<0.10 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 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

Bioactivity



When Recombinant Mouse Netrin-G2a Fc Chimera (Catalog # 2744-NG) is coated at 1 µg/mL, Recombinant Human LRRC4 Fc Chimera (Catalog # 9375-LR) binds with an ED_{50} = 2-12 ng/mL.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Recombinant Human LRRC4 Fc Chimera

Catalog Number: 9375-LR

BACKGROUND

LRRC4 (Leucine rich repeat/LRR-containing protein 4), also called NGL-2 (netrin-G ligand-2) or NAG14 (nasopharyngeal carcinoma-associated gene 14), is a 55 kDa (predicted) type I transmembrane protein that is a member of the NGL family of synaptic LRR adhesion molecules (1, 2). Human LRRC4 cDNA encodes 653 amino acids (aa) that include a 38 aa signal sequence, a 489 aa extracellular domain (ECD), a 21 aa transmembrane domain, and a 105 aa cytoplasmic domain. The ECD contains nine LRRs (aa 74-288), a C2 type Ig like domain (aa 354-440), and a Thr-rich segment (aa 455-526). Within the ECD, human LRRC4 shares 98% aa identity with mouse and rat, 99% aa identity with canine and bovine, and 99.6% aa identity with equine LRRC4. It also shares 54-55% aa identity with family members LRRC4C/NGL-1 and LRRC4B/NGL-3, but each recognizes different ligands (1). LRRC4 is predominantly expressed in the brain on neurons and astrocytes as a ligand for netrin-G2 in post-synaptic membranes (2-4). It is proposed to regulate the formation of excitatory synapses via recruitment of PSD-95 to the cytoplasmic domain after aggregation of LRRC4 at the surface (3, 5). It suppresses proliferation by down-regulating cell signaling pathways, resulting in altered expression of cell cycle regulating proteins and delay at the late G1 phase (1, 2, 6-8). It is thus considered a tumor suppressor protein and is often down-regulated in brain tumors, particularly gliomas (1, 2, 6). Forced expression of LRRC4 in tumor cells slows proliferation and promotes differentiation (1, 4, 9).

References:

1. Woo, J. *et al.* (2009) Mol. Cell. Neurosci. **42**:1.
2. Zhang, Q. *et al.* (2005) FEBS Lett. **579**:3674.
3. Kim, S. *et al.* (2006) Nat. Neurosci. **9**:1294.
4. Wu, M. *et al.* (2007) Acta Biochim Biophys Sin (Shanghai) **39**:731.
5. Nishimura-Akiyoshi, S. *et al.* (2007) Proc. Natl. Acad. Sci. USA **104**:14801.
6. Wu, M. *et al.* (2006) Mol. Biol. Cell **17**:3534.
7. Wu, M. *et al.* (2008) J. Cell. Biochem. **103**:245.
8. Wu, M. *et al.* (2008) J. Cell. Physiol. **214**:65.
9. Zhang, W. *et al.* (2008) Genes Brain Behav. **7**:385.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956