Recombinant Human LRFN5 Fc Chimera

Catalog Number: 9385-SA

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived

Human LRFN5 (Gln18-Gly527) Accession # Q96NI6	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis: No results obtained. Gln18 inferred from enzymatic pyroglutamate treatment revealing Ile19

Structure / Form: Disulfide-linked homodimer

Predicted Molecular Mass: 83 kDa

SPECIFICATIONS

SDS-PAGE: 90-107 kDa, reducing conditions

Activity: Measured by its binding ability in a functional ELISA.
When Recombinant Human LRFN5 Fc Chimera is used at 1 µg/mL, the concentration of Recombinant Human LAR that produces 50% optimal binding response is 1.5-9 µg/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.

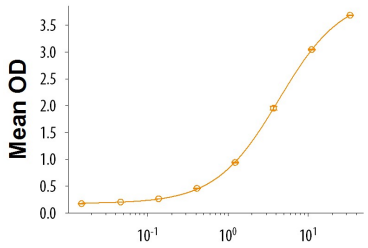
Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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 Human LRFN5 Fc Chimera (Catalog # 9385-SA) is used at 1 µg/mL, 100 µL/well, Recombinant Human LAR (Catalog # 9377-PF) binds with an ED_{50} of 1.5-9 µg/mL.

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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

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BACKGROUND

Synaptic adhesion-like molecule 5 (SALM5; also leucine-rich repeat and fibronectin type-III domain-containing protein 5 (LRFN5)) is an approximately 90 kDa member of the SALM family of type I transmembrane glycoproteins (1). LRFNs comprise a family of synaptic adhesion molecules consisting of five members, each containing of an extracellular domain (ECD) of six leucine-rich repeats (LRR), an IgC2-like domain, and a fibronectin type-III domain, tandemly aligned in that order (1, 2). LRFN-3 and -5 lack a C-terminal intracellular PDZ binding domain, which is conserved among LRFN-1, 2 and 4. Mature human LRFN-5 shares 99% amino acid sequence identity with mature mouse LRFNs. LRFN-5, like the other LRFNs, promotes neurite outgrowth as well as playing a role in neuroinflammation (3, 4). LRFN-5 is expressed in the brain and is capable of inducing presynaptic differentiation (5). Reduced expression of LRFN-5 has been associated with autism spectrum disorders and schizophrenia (6, 7). LAR family receptor protein tyrosine phosphatases (LAR-RPTPs) have been identified as novel ligands of LRFN-5 that mediates LRFN-5 dependent presynaptic differentiation in a splicing- dependent manner. LRFN-5 interacts directly with the Ig domain of LAR-RPTPs. The postsynaptic LRFN-5 promotes synapse development by trans-synaptically interacting with presynaptic LAR-RPTPs which is important for the regulation of excitatory synaptic strength (8).

References:

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8. Choi, Y. *et.al.* (2016) Sci Rep. **6**:26676.

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