Recombinant Human SALM4/LRFN3

Catalog Number: 5349-SA

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Ser17-Met539 with a C-terminal 6-His tag Accession # Q9BTN0
N-terminal Sequence Analysis	Ser17
Predicted Molecular Mass	56.3 kDa

SPECIFICATIONS

SDS-PAGE	80-85 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of Neuro-2A mouse neuroblastoma cells. When 5 x 10^4 cells/well are added to rhSALM4 coated plates (2.5 µg/mL, 100 µL/well), approximately 50%-70% will adhere after 30 minutes at 37 °C. Optimal dilutions should be determined by each laboratory for each application.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 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.

BACKGROUND

Synaptic adhesion-like molecule 4 (SALM4; also leucine-rich repeat and fibronectin type-III domain-containing protein 3 (Lrfn3) is an approximately 90 kDa member of the Lrfn family of type I transmembrane glycoproteins (1). Human SALM4 is synthesized as a 628 amino acid (aa) precursor that contains a 16 aa signal sequence, a 523 aa extracellular domain (ECD), a 21 aa transmembrane region, and a 68 aa cytoplasmic region. The ECD consists of six leucine-rich repeats (LRR), an IgC2-like domain, and a fibronectin type-III domain, tandemly aligned in that order (1 - 2). In addition, there are five potential sites for N-linked glycosylation. SALM4 and -5 lack a C-terminal intracellular PDZ binding domain, which is conserved among SALMs 1-3. Mature human SALM4 shares 96% aa sequence identity with mature mouse SALM4. Northern blot analysis showed that in mice, SALM4 is strongly expressed in the adult brain and is also present in the adult gastrointestinal tract and kidneys (1). It is distributed throughout the neuron, including the growth cone (3). In the developing mouse embryo, a temporal expression profile blot revealed a general increment of expression around E10.5, with weak expression detected before E10.5 (1). SALM4, like the other SALMs, promotes neurite outgrowth (3). Specifically, the SALMs modify total outgrowth and neurite branching (3).

References:

1. Morimura, N. *et al.* (2006) Gene **380**:72.
2. Wang, C.-Y. *et al.* (2006) J. Neurosci. **26**:2174.
3. Wang, P.Y. *et al.* (2008) Mol. Cell. Neurosci. **39**:83.

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