Human SALM3/LRFN4 Antibody

Monoclonal Mouse IgG_1 Clone # 578102

Catalog Number: MAB5445

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SALM3/LRFN4 in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant human (rh) SALM1, approximately 20-25% cross-reactivity with recombinant human rhSALM2, and no cross-reactivity with rhSALM4 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 578102
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human SALM3/LRFN4 Cys17-Leu518 Accession # Q6PJG9
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

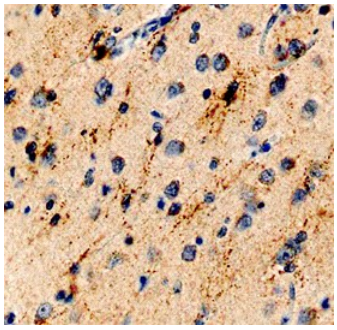
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



SALM3/LRFN4 in Human Brain. SALM3/LRFN4 was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using Mouse Anti-Human SALM3/LRFN4 Monoclonal Antibody (Catalog # MAB5445) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Synaptic adhesion-like molecule 3 (SALM3; also leucine-rich repeat and fibronectin type-III domain-containing protein 4 (LRFN4) is an approximately 90 kDa member of the Lrfn family of type I transmembrane glycoproteins (1). Human SALM3 is synthesized as a 635 amino acid (aa) precursor that contains a 16 aa signal sequence, a 502 aa extracellular domain (ECD), a 21 aa transmembrane region, and a 96 aa cytoplasmic region. The ECD consists of seven 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 six potential sites for N-linked glycosylation. The C-terminal region contains an intracellular PDZ binding domain, which is conserved among SALMs 1 - 3, but is absent in SALMs 4 and 5 (3). Mature human SALM3 shares 97% aa sequence identity with mature mouse SALM3. Northern blot analysis showed that in mice, SALM3 is strongly expressed in the adult brain and is also present in the adult testis (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). SALM3, like the other SALMs, promotes neurite outgrowth (3). Specifically, the SALMs modify total outgrowth and neurite branching (3). SALM3 may also be involved in synapse formation, synaptic maintenance, and other cellular interactions (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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