R&D SYSTEMS
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Mouse Spinesin Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1928

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Spinesin in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant human Spinesin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Spinesin Tyr61-Arg445 Accession # NP_109634
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.

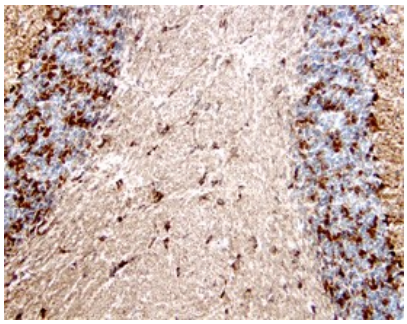
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Mouse Spinesin (Catalog # 1928-SE)
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Spinesin (Catalog # 1928−SE), see our available Western blot detection antibodies

DATA

Immunohistochemistry



Spinesin in Mouse Brain. Spinesin was detected in perfusion fixed frozen sections of mouse brain (cerebellum) using Goat Anti-Mouse Spinesin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1928) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of neurons in the granular cell layer. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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

Spinesin, encoded by the TMPRSS5 gene, is a new member of type II transmembrane serine proteases (TTSPs) (1). Mouse Spinesin contains the following structural domains: a short N-terminal cytoplasmic tail, a transmembrane domain, a stem region and a serine protease domain (2). The domain structure of Spinesin is common to other TTSPs, many of which have additional domains. The stem region of Spinesin contains a scavenger receptor-like domain. There could be 4 types of transcripts due to alternative splicing (3). Type 4 predicts 10 extra amino acids at the N-terminus as compared to type 3. The ectodomain corresponding to type 3 (residues 61-445) or type 4 (residues 71-455) was expressed and purified as a single chain pro-enzyme. By SDS-PAGE, the pro-enzyme migrates as multiple forms, possibly due to differential glycosylation. The pro-enzyme can be activated by trypsin treatment. The resulting enzyme is active and its activity is measured as described above. The activated enzyme is a disulfide bond-linked dimer.

References:

1. Shibata, K. *et al*. (2000) Genome Res. **10**:1757.
2. Yamaguchi, Y. *et al*. (2002) J. Biol. Chem. **277**:6806.
3. Watanable, Y. *et al*. (2004) Biochem. Biophys. Res. Commun. **324**:333.

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