

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Spinesin in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse Spinesin is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 376608
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Spinesin Tyr27-Leu413 Accession # Q0P514
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 either lyophilized or 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
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Spinesin (Catalog # 2495-SE), see our available Western blot detection antibodies
Neutralization		Measured by its ability to neutralize Recombinant Human Spinesin (1 µg/mL, Catalog # 2495-SE) cleavage of the fluorogenic peptide substrate Boc-QAR-Amc (0.1 mM, Catalog # ES014). The Neutralization Dose (ND ₅₀) is typically 7 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> ● 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 member of type II transmembrane serine proteases (TTSPs) (1). Human Spinesin contains the following structural domains: a short N-terminal cytoplasmic tail (amino acid residues 1-49), a transmembrane domain (residues 50-70), a stem region and a serine protease domain (residues 71-457) (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. The ectodomain of human Spinesin (residues 71-457) was expressed and purified as a single chain pro-enzyme. The deduced amino acid sequence contains a Leu instead of a Phe residue at position 369; the former is identical to the mouse protein (3, 4). The pro-enzyme can be activated and the resulting enzyme activity can be measured as described in the Activity Assay Protocol.

References:

1. Hooper, J.D. *et al.* (2001) *J. Biol. Chem.* **276**:857.
2. Yamaguchi, Y. *et al.* (2002) *J. Biol. Chem.* **277**:6806.
3. Carninci, P. *et al.* (2000) *Genome Res.* **10**:1617.
4. Shibata, K. *et al.* (2000) *Genome Res.* **10**:1757.