Bovine SPAM1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6436

DESCRIPTION

Species Reactivity	Bovine
Specificity	Detects bovine SPAM1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant bovine SPAM1 Leu36-Thr497 Accession # AAI10184
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.

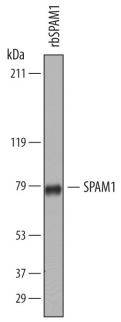
APPLICATIONS

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
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Bovine SPAM1 by Western Blot. Western blot shows lysates of recombinant bovine SPAM1 (Catalog # 6436-GH). PVDF membrane was probed with 1 µg/mL of Sheep Anti-Bovine SPAM1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6436) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for SPAM1 at approximately 78 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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

Sperm adhesion molecule 1 (SPAM1), also known as PH-20 hyaluronidase (1), is encoded by one of the six hyaluronidase-like genes (1, 2, 3). SPAM1 is a GPI-anchored enzyme located on the sperm surface and inner acrosomal membrane (4). SPAM1 degrades hyaluronic acid (HA), a major structural glycosaminoglycan found in extracellular matrices and basement membranes. The enzyme activity enables sperm to penetrate through the HA-rich cumulus cell layer surrounding the oocyte and therefore facilitates the fertilization process (5). However, detailed enzymatic analysis of this enzyme is hindered by the limited techniques/methods available to monitor the HA degradation products (6). A novel method for analyzing SPAM1 activity was utilized here. Because of the structural similarity between HA (repeating units of GlcAβ1-3GlcNAc) and chondroitin sulfate (repeating units of GlcAβ1-3GalNAc), the enzyme is also able to hydrolyze chondroitin sulfate. In this assay, radiolabeled chondroitin sulfate was digested with recombinant SPAM1. Degradation products were then separated using a polyacrylamide electrophoresis and visualized with an X-ray film (7). The bovine SPAM1 is 63% identical to human homologue in sequence.

References:

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