# Bovine SPAM1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6436

## DESCRIPTION

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|---|---|
| **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<br>Leu36-Thr497<br>Accession # AAI10184 |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

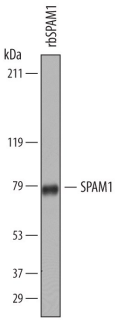
## APPLICATIONS

**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** | 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

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| **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.<br>*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.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 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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