**Product datasheet**

**Anti-PSMA antibody [YPSMA-1] ab19071**

![Stars](https://via.placeholder.com/15) 8 Abreviews  12 References  2 Images

### Overview

**Product name**  
Anti-PSMA antibody [YPSMA-1]

**Description**  
Mouse monoclonal [YPSMA-1] to PSMA

**Host species**  
Mouse

**Tested applications**  
Suitable for: ELISA, WB, IHC-P, IHC-Fr, ICC/IF, Flow Cyt

**Species reactivity**  
Reacts with: Human

**Immunogen**  
Crude membrane protein preparation from pooled prostate malignant carcinoma from China.

**Positive control**  
LNCaP cell line, recombinant PSMA.

**General notes**  
Abcam is committed to meeting high quality standards of ethical manufacturing and has decided to discontinue this product by June 2020 as it has been generated by the ascites method. We are sorry for any inconvenience this may cause. We suggest ab133579 or ab76104 as possible replacements.

This antibody detects PMSA in prostate cancer but shows little or no cross-reactivity to benign prostate hyperplasia or to normal prostatic tissue.

### Properties

**Form**  
Liquid

**Storage instructions**  
Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

**Storage buffer**  
pH: 7.00  
Constituent: PBS

**Purity**  
Ascites

**Purification notes**  
Purified from ascites.

**Primary antibody notes**  
This antibody detects PMSA in prostate cancer but shows little or no cross-reactivity to benign prostate hyperplasia or to normal prostatic tissue.

**Clonality**  
Monoclonal

**Clone number**  
YPSMA-1

**Myeloma**  
Sp2/0-Ag14

**Isotype**  
IgG2b
**Light chain type**
kappa

**Applications**

Our Abpromise guarantee covers the use of ab19071 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★★☆☆☆☆☆</td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 84 kDa.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★☆☆☆☆☆</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>★★★★★★☆☆☆☆</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>Use 0.1µg for 10^6 cells.</td>
<td>ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.</td>
</tr>
</tbody>
</table>

**Target**

**Function**
Has both folate hydrolase and N-acetylated-alpha-linked-acidic dipeptidase (NAALADase) activity. Has a preference for tri-alpha-glutamate peptides. In the intestine, required for the uptake of folate. In the brain, modulates excitatory neurotransmission through the hydrolysis of the neuropeptide, N-acetylaspartylglutamate (NAAG), thereby releasing glutamate. Isoform PSM-4 and isoform PSM-5 would appear to be physiologically irrelevant. Involved in prostate tumor progression. Also exhibits a dipeptidyl-peptidase IV type activity. In vitro, cleaves Gly-Pro-AMC.

**Tissue specificity**
Highly expressed in prostate epithelium. Detected in urinary bladder, kidney, testis, ovary, fallopian tube, breast, adrenal gland, liver, esophagus, stomach, small intestine, colon and brain (at protein level). Detected in the small intestine, brain, kidney, liver, spleen, colon, trachea, spinal cord and the capillary endothelium of a variety of tumors. Expressed specifically in jejunum brush border membranes. In the brain, highly expressed in the ventral striatum and brain stem. Also expressed in fetal liver and kidney. Isoform PSMA' is the most abundant form in normal prostate. Isoform PSMA-1 is the most abundant form in primary prostate tumors. Isoform PSMA-2 is also found in normal prostate as well as in brain and liver. Isoform PSMA-9 is specifically expressed in prostate cancer.

**Sequence similarities**
Belongs to the peptidase M28 family. M28B subfamily.

**Domain**
The NAALADase activity is found in the central region, the dipeptidyl peptidase IV type activity in the C-terminal.

**Post-translational modifications**
The first two amino acids at the N-terminus of isoform PSMA' appear to be cleaved by limited proteolysis. The N-terminus is blocked.

**Cellular localization**
Cytoplasm and Cell membrane.
Overlay histogram showing LnCAP cells stained with ab19071 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab19071, 0.1μg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H+L) (ab150113) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 1μg/1x10⁶ cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in LnCAP cells fixed with 80% methanol (5 min) permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

Immunohistochemistry of formalin-fixed paraffin embedded prostate cancer tissue sections labeling PSMA with ab19071 at 1:1000 dilution.
• Extensive multi-media technical resources to help you
• We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions
• Guarantee only valid for products bought direct from Abcam or one of our authorized distributors