### Overview

**Product name:** Anti-PSMA antibody [EPR6253]

**Description:** Rabbit monoclonal [EPR6253] to PSMA

**Host species:** Rabbit

**Tested applications:** Suitable for: WB, IP, IHC-P  
**Unsuitable for:** Flow Cyt or ICC/IF

**Species reactivity:** Reacts with: Human

**Immunogen:** Synthetic peptide within Human PSMA aa 1-150 (N terminal). The exact sequence is proprietary.

**Positive control:** Human prostate carcinoma tissue; LNCaP cell lysate

**General notes:**

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated ‘PUR’ on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

This product is a recombinant rabbit monoclonal antibody.

### Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.</td>
</tr>
</tbody>
</table>
| **Storage buffer**        | pH: 7.20  
Preservative: 0.01% Sodium azide  
Constituents: 59% PBS, 0.05% BSA, 40% Glycerol |
| **Purity**                | Protein A purified                                                      |
| **Clonality**             | Monoclonal                                                             |
| **Clone number**          | EPR6253                                                                 |
Isotype

IgG

Applications

Our Abpromise guarantee covers the use of ab133579 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>IP</td>
<td>1/10 - 1/100.</td>
<td></td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/250 - 1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See IHC antigen retrieval protocols.</td>
<td></td>
</tr>
</tbody>
</table>

Application notes

Is unsuitable for Flow Cyt or ICC/IF.

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.

Images
Anti-PSMA antibody [EPR6253] (ab133579) at 1/100000 dilution (Purified) + LNCaP lysate at 20 µg

**Secondary**
HRP goat anti-rabbit (H+L)

**Predicted band size:** 84 kDa
**Observed band size:** 110 kDa

*why is the actual band size different from the predicted?*

5% NFDM/TBST dilution buffer

Immunohistochemical staining of paraffin embedded human prostate cancer with purified ab133579 at a working dilution of 1 in 300. HRP polymer for rabbit IgG was used as the secondary antibody, and the sample was counter stained with hematoxylin.

Unpurified ab133579 showing positive staining in Prostatic carcinoma tissue.
**Immunoprecipitation** - Anti-PSMA antibody [EPR6253] (ab133579)

Primary: ab133579, 1/50 dilution
Dilution buffer: NFDM/TBST, 5%
Sample: LNCaP
Secondary: HRP goat anti-rabbit (H+L), 1/1000 dilution

Anti-PSMA antibody [EPR6253] (ab133579) at 1/50 dilution + LNCaP with NFDM/TBST at 5 

**Secondary**
HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Observed band size:** 110 kDa why is the actual band size different from the predicted?

**Western blot** - Anti-PSMA antibody [EPR6253] (ab133579)

Anti-PSMA antibody [EPR6253] (ab133579) at 1/50000 dilution (Unpurified) + LNCaP cell lysate at 10 µg

**Secondary**
HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 84 kDa
Unpurified ab133579 showing positive staining in Normal prostate tissue.

Unpurified ab133579 showing negative staining in Thyroid gland carcinoma tissue.

Unpurified ab133579 showing negative staining in Normal colon tissue.
Unpurified ab133579 showing negative staining in Breast carcinoma tissue.

Unpurified ab133579 showing negative staining in Normal spleen tissue.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- 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