

## Product datasheet

# Human PSMA peptide ab41442

### Description

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<b>Product name</b>	Human PSMA peptide
<b>Purity</b>	> 90 % HPLC.
<b>Animal free</b>	No
<b>Nature</b>	Synthetic
<b>Species</b>	Human

### Specifications

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Our [Abpromise guarantee](#) covers the use of **ab41442** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Blocking - Blocking peptide for Anti-PSMA antibody ( <a href="#">ab41034</a> )
<b>Form</b>	Liquid
<b>Additional notes</b>	<ul style="list-style-type: none"><li>- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.</li><li>- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.</li><li>- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.</li><li>- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.</li><li>- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.</li></ul>

### Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.  Information available upon request.
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### General Info

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<b>Function</b>	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-aceylaspartyglutamate (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.
<b>Tissue specificity</b>	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.
<b>Sequence similarities</b>	Belongs to the peptidase M28 family. M28B subfamily.
<b>Domain</b>	The NAALADase activity is found in the central region, the dipeptidyl peptidase IV type activity in the C-terminal.
<b>Post-translational modifications</b>	The first two amino acids at the N-terminus of isoform PSMA' appear to be cleaved by limited proteolysis. The N-terminus is blocked.
<b>Cellular localization</b>	Cytoplasm and Cell membrane.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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