

# Immunotag™ Prostate-Specific Membrane Antigen (PSMA) (PT1653) mouse mAb

Antibody Specification	
Catalog No.	ITM6093
Product Description	Immunotag™ Prostate-Specific Membrane Antigen (PSMA) (PT1653) mouse mAb
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	PSMA (2A2)
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	IHC-p,WB
Recommended Dilution	IHC-p 1:100-500WB 1:500-2000
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Mouse
Immunogen	Synthesized peptide derived from human Prostate-Specific Membrane Antigen (PSMA)
Specificity	This antibody detects endogenous levels of human Prostate-Specific Membrane Antigen (PSMA)
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen
Form	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Gene Name	FOLH1 FOLH NAALAD1 PSM PSMA GIG27
Accession No.	Q04609

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Alternate Names	Glutamate carboxypeptidase 2 (EC 3.4.17.21) (Cell growth-inhibiting gene 27 protein) (Folate hydrolase 1) (Folypoly-gamma-glutamate carboxypeptidase) (FGCP) (Glutamate carboxypeptidase II) (GCPII) (Membrane glutamate carboxypeptidase) (mGCP) (N-acetylated-alpha-linked acidic dipeptidase I) (NAALADase I) (Prostate-specific membrane antigen) (PSM) (PSMA) (Pteroylpoly-gamma-glutamate carboxypeptidase)
Description	folate hydrolase 1(FOLH1) Homo sapiens This gene encodes a type II transmembrane glycoprotein belonging to the M28 peptidase family. The protein acts as a glutamate carboxypeptidase on different alternative substrates, including the nutrient folate and the neuropeptide N-acetyl-l-aspartyl-l-glutamate and is expressed in a number of tissues such as prostate, central and peripheral nervous system and kidney. A mutation in this gene may be associated with impaired intestinal absorption of dietary folates, resulting in low blood folate levels and consequent hyperhomocysteinemia. Expression of this protein in the brain may be involved in a number of pathological conditions associated with glutamate excitotoxicity. In the prostate the protein is up-regulated in cancerous cells and is used as an effective diagnostic and prognostic indicator of prostate cancer. This gene likely arose from a duplication event of a nearby chromosomal region. Alter
Protein Expression	Brain,Jejunum,Liver,Peripheral Nervous System,Prostate,Prostatic carcinoma,
Subcellular Localization	Cytoplasmic, Membranous

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Protein Function	<p>Experimental confirmation may be lacking for some isoforms, catalytic activity: Release of an unsubstituted, C-terminal glutamyl residue, typically from Ac-Asp-Glu or folylpoly-gamma-glutamates., cofactor: Binds 2 zinc ions per subunit. Required for NAALADase activity., domain: The NAALADase activity is found in the central region, the dipeptidyl peptidase IV type activity in the C-terminal., enzyme regulation: The NAALADase activity is inhibited by beta-NAAG, quisqualic acid, 2-(phosphonomethyl) pentanedioic acid (PMPA) and EDTA. Activated by cobalt., function: Also exhibits a dipeptidyl-peptidase IV type activity. In vitro, cleaves Gly-Pro-AMC., 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-aceylaspartylglutamate (NAAG), thereby releasing glutamate. Isoforms PSM-4 and PSM-5 would appear to be physiologically irrelevant. Involved in prostate tumor progression., induction: In the prostate, up-regulated in response to androgen deprivation., miscellaneous: PSMA is used as a diagnostic and prognostic indicator of prostate cancer, and as a possible marker for various neurological disorders such as schizophrenia, Alzheimer disease and Huntington disease., polymorphism: Genetic variation in FOLH1 may be associated with low folate levels and consequent hyperhomocysteinemia. This condition can result in increased risk of cardiovascular disease, neural tube defects, and cognitive deficits., PTM: The first two amino acids at the N-terminus of isoform PSMA' appear to be cleaved by limited proteolysis., PTM: The N-terminus is blocked., similarity: Belongs to the peptidase M28 family. M28B subfamily., tissue specificity: Highly expressed in prostate epithelium. Also expressed, 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. In the prostate, the PSMA' cytosolic isoform is the most abundant form in normal tissue, the membrane-bound PSMA-1 form in primary prostate tumors. The PSMA-2 isoform also found in normal prostate as well as in brain and liver.,</p>
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.