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Datasheet for ABIN1302364 anti-PSMA antibody (AA 44-750)

8 Images

9 Publications



Overview

Quantity:	0.1 mg
Target:	PSMA (FOLH1)
Binding Specificity:	AA 44-750
Reactivity:	Human, Mouse, Rat, Pig
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PSMA antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunocytochemistry (ICC)

Product Details

Immunogen:	Recombinant fragment of human GCPII (amino acids 44-750) produced in S2 cells
Clone:	GCP-04
lsotype:	lgG1
Specificity:	The mouse monoclonal antibody GCP-04 recognizes amino acids 100-104 of extracellular domain of denaturated glutamate carboxypeptidase II (PSMA, NAALADase, FOLH1), an approximately 95-110 kDa transmembrane glycoprotein.
Cross-Reactivity (Details):	Human, Porcine, Mouse, Rat, Other not determined
Purification:	Purified by protein-A affinity chromatography.
Purity:	> 95 % (by SDS-PAGE)

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Target Details	
Target:	PSMA (FOLH1)
Alternative Name:	GCPII / PSMA (FOLH1 Products)
Background:	Folate hydrolase 1,Glutamate carboxypeptidase II (GCPII), also known as N-acetyl-alpha-linked acidic dipeptidase I (NAALADase I), folate hydrolase (FOLH1), and prostate-specific membrane antigen (PSMA), is an approximately 95-110 kDa type II transmembrane glycoprotein expressed in various tissues. In nervous system GCPII cleaves abundant N-acetylaspartylglutamate, which is released from neurons in a calcium-dependent manner, to N-acetylaspartate and glutamate. As immoderate glutamate concentration is neurotoxic, GCPII contributes to pathological conditions regarding e.g. Alzheimer's disease, Huntington's disease, epilepsy, schizophrenia, stroke or neuropathic pain and appears to be an interesting therapeutic target. In jejunum GCPII hydrolyzes pteroylpoly-gamma-glutamate to folate and glutamate, enabling folate to be absorbed by gastrointestinal tract. GCPII, which is present in a number of tissues at low levels, is overexpressed in neovasculature of most solid tumours and is a target enzyme for diagnosis and treatment of prostate cancer. Normal human prostate express more mRNA coding for a cytosolic GCPII form truncated at the N-terminus (PSM') than mRNA for membrane-bound GCPII, and this ratio is reversed upon malignant transformation.,GCP2, FOLH1, NAALADase I, PGGCP, FGCP, FGCP,
Gene ID:	2346
UniProt:	Q04609
Application Details	
Application Notes:	Western blotting: Recommended dilution: 1 µg/mL, positive control: LNCaP cell line. Sample preparation: Resuspend approx. 50 mil. cells in 1 mL cold lysis buffer (1 % NP-40). Incubate 30 min on ice. Mix lysate with non-reducing/reducing Laemmli SDS-PAGE sample buffer. Both reducing and non-reducing conditions.
Restrictions:	For Research Use only
Handling	
Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

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	should be handled by trained staff only.
Handling Advice:	Do not freeze.
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Do not freeze.
Publications	
Product cited in:	Wächter, Di Fazio, Maurer, Manoharan, Keber, Pfestroff, Librizzi, Bartsch, Luster, Eilsberger: "
	Prostate-Specific Membrane Antigen in Anaplastic and Poorly Differentiated Thyroid Cancer-A
	New Diagnostic and Therapeutic Target?" in: Cancers , Vol. 13, Issue 22, (2021) (PubMed).
	Schreiber, Hänze, Nimphius, Verburg, Luster, Hofmann, Hegele: "Prostate specific membrane
	antigen (PSMA) in urothelial cell carcinoma (UCC) is associated with tumor grading and
	staging." in: Journal of cancer research and clinical oncology, (2020) (PubMed).
	Gao, Xu, Cui, Zhang, Lin, Cai, Wang, Luo, Zheng, Wang, Luo, Jiang, Neale, Zhong: "Mice lacking
	glutamate carboxypeptidase II develop normally, but are less susceptible to traumatic brain
	injury." in: Journal of neurochemistry, Vol. 134, Issue 2, pp. 340-53, (2015) (PubMed).
	Tykvart, Navrátil, Sedlák, Corey, Colombatti, Fracasso, Koukolík, Ba?inka, Sácha, Konvalinka: "
	Comparative analysis of monoclonal antibodies against prostate-specific membrane antigen
	(PSMA)." in: The Prostate , Vol. 74, Issue 16, pp. 1674-90, (2014) (PubMed).
	Rovenská, Hlouchová, Sácha, Mlcochová, Horák, Zámecník, Barinka, Konvalinka: "Tissue
	expression and enzymologic characterization of human prostate specific membrane antigen
	and its rat and pig orthologs." in: The Prostate , Vol. 68, Issue 2, pp. 171-82, (2007) (PubMed).
	There are more publications referencing this product on: Product page





1 2 3 250 kDa 150 kDa 100 kDa 75 kDa 50 kDa 37 kDa 25 kDa

Immunohistochemistry (Paraffin-embedded Sections)

Image 1. Immunohistochemistry staining of GCPII in porcine kidney by GCP-04 monoclonal antibody. Highly positive proximal glomeruli.

Immunohistochemistry

Image 2. Immunohistochemistry of GCPII in human Medulla oblongata by monoclonal antibody. Mag. 40x; positive astrocytes in white matter.

Western Blotting

Image 3. Immunostaining of a fragment of human GCPII (aminoacids 44-750) produced in S2 cells on Western blot by GCP-04 monoclonal antibody. Lanes 1, 2, 3 represent 800, 400 and 200 pg of the protein.

Please check the product details page for more images. Overall 8 images are available for ABIN1302364.

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