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30-1370: Anti-GCPII / PSMA Monoclonal Antibody (Clone:GCP-04)

Clonality :	Monoclonal
Clone Name :	GCP-04
Application :	WB
Reactivity :	Human
Gene :	FOLH1
Gene ID :	2346
Uniprot ID :	Q04609
Format :	Purified
Alternative Name :	FOLH1,FOLH,NAALAD1,PSM,PSMA,GIG27
Isotype :	Mouse IgG1
Immunogen Information :	Recombinant fragment of human GCPII (amino acids 44-750) produced in S2 cells

Description

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. AlzheimerÂ´s disease, HuntingtonÂ´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 (PSMÂ´) than mRNA for membrane-bound GCPII, and this ratio is reversed upon malignant transformation.

Product Info

Amount :	0.1 mg
Purification :	Purified by protein-A affinity chromatography
Storage condition :	Store at 2-8°C. Do not freeze.

Application Note

Western Blotting *Recommended dilution:* 1 Âµg/ml
Positive control: LNCaP cell line

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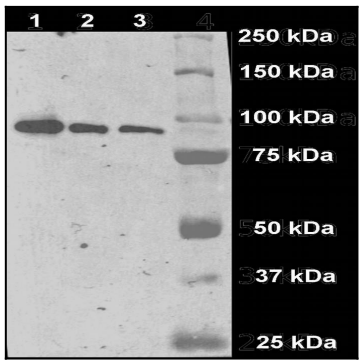


Figure 1: Immunostaining of a fragment of human GCPII (aminoacids 44-750) produced in S2 cells on Western blot by GCP-04 monoclonal antibody. Lanes 2, 3 represent 800, 400 and 200 pg of the protein.



Figure 2: Immunohistochemistry of GCPII in human Medulla oblongata by GCP-04 monoclonal antibody. Mag. 40x; positive astrocytes in white matter.

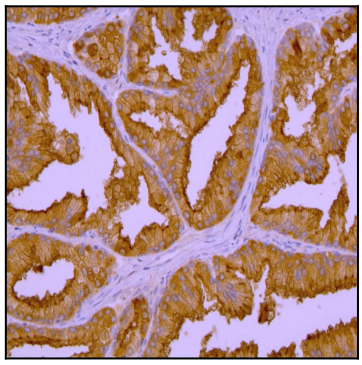


Figure 3: Immunohistochemistry of GCPII in human prostate by GCP-04 monoclonal antibody. Mag. 400x; positive epithelium of the prostate glands.

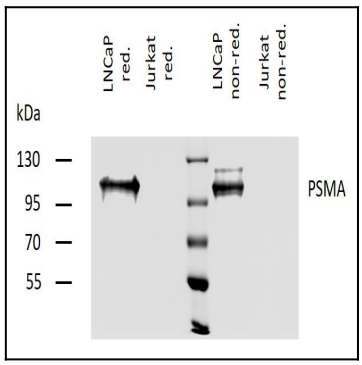


Figure 4: Western blotting analysis of human PSMA using mouse monoclonal antibody GCP-04 on lysates of LNCaP cell line and Jurkat cell line (PSMA non-expressing cell line; negative control) under reducing and non-reducing conditions. Nitrocellulose membrane was probed with 2 µg/ml of mouse anti-PSMA monoclonal antibody followed by IRDye800-conjugated anti-mouse secondary antibody.

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