

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

<b>Clonality :</b>	Monoclonal
<b>Clone Name :</b>	GCP-04
<b>Application :</b>	WB
<b>Reactivity :</b>	Human
<b>Gene :</b>	FOLH1
<b>Gene ID :</b>	2346
<b>Uniprot ID :</b>	Q04609
<b>Format :</b>	Purified
<b>Alternative Name :</b>	FOLH1,FOLH,NAALAD1,PSM,PSMA,GIG27
<b>Isotype :</b>	Mouse IgG1
<b>Immunogen Information :</b>	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. 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 (PSMA') than mRNA for membrane-bound GCPII, and this ratio is reversed upon malignant transformation.

#### Product Info

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

#### Application Note

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

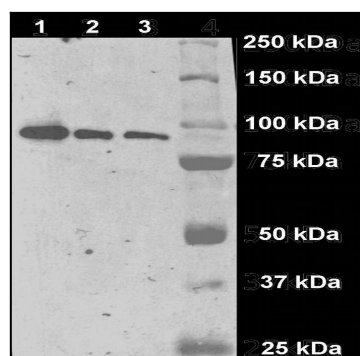


Figure 1: Immunostaining of a fragment of human GCPII (aminoacids 44-750) produced in S2 cells on Western blot by GCP-04 monoclonal antibody. Lanes 2, 3 represent 800, 400 and 200 pg of the protein.

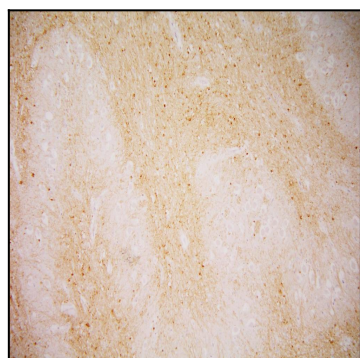


Figure 2: Immunohistochemistry of GCPII in human Medulla oblongata by GCP-04 monoclonal antibody. Mag. 40x; positive astrocytes in white matter.

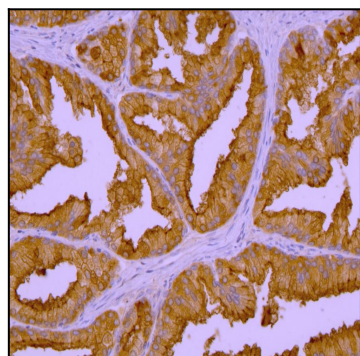


Figure 3: Immunohistochemistry of GCPII in human prostate by GCP-04 monoclonal antibody. Mag. 400x; positive epithelium of the prostate glands.

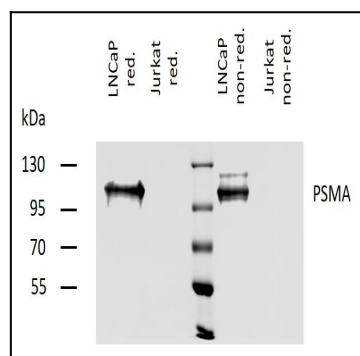


Figure 4: Western blotting analysis of human PSMA using mouse monoclonal antibody GCP-04 on lysates of LNCaP cell line and Jurkat cell line (PSMA non-expressing cell line; negative control) under reducing and non-reducing conditions. Nitrocellulose membrane was probed with 2 µg/ml of mouse anti-PSMA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