

ARG82981 Human GCPII / PSMA ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG82981 Human GCPII / PSMA ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human GCPII / PSMA in serum, plasma, cell culture supernatant samples.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	Cross-Reactivity: Not reacts with Human PSA, CEA, LIF; Mouse PSMA and PSA; Rat PSMA and PSA.
Target Name	GCPII / PSMA
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	0.39 ng/ml
Sample Type	Serum, plasma and cell culture supernatants.
Standard Range	0.78 - 50 ng/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: less than 10% Inter-Assay CV: less than 10%
Alternate Names	FGCP; GCP2; PSM; Glutamate carboxypeptidase II; PSMA; NAALADase I; Membrane glutamate carboxypeptidase; Prostate-specific membrane antigen; FOLH; N-acetylated-alpha-linked acidic dipeptidase I; GCPII; Glutamate carboxypeptidase 2; NAALADase; NAALAD1; Folate hydrolase 1; EC 3.4.17.21; Folylpoly-gamma-glutamate carboxypeptidase; mGCP; Cell growth-inhibiting gene 27 protein; Pteroylpoly-gamma-glutamate carboxypeptidase

Application Instructions

Assay Time	~ 4 hours
------------	-----------

Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	FOLH1
Gene Full Name	folate hydrolase (prostate-specific membrane antigen) 1
Background	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.

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-acetylaspartylglutamate (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. [UniProt]

Research Area

Cancer antibody; Metabolism antibody; Signaling Transduction antibody

PTM

The first two amino acids at the N-terminus of isoform PSMA' appear to be cleaved by limited proteolysis.
The N-terminus is blocked.