

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PSMA/FOLH1/NAALADase I in direct ELISA and Western blot. In direct ELISAs, less than 10% cross-reactivity with recombinant human (rh) NAALADase-like 2 and no cross-reactivity with rhNAALADase-like 1, rhNAALADase-like 3, recombinant mouse (rm) NAALADase I, or rmNAALADase-like 2 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 460420
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human PSMA/FOLH1/NAALADase I Lys44-Ala750 Accession # Q04609
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	LNCaP human prostate cancer cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human prostate-specific membrane antigen (PSMA), a tumor marker in prostate cancer encoded by the FOLH1 gene, is a type II transmembrane zinc metallopeptidase that is most highly expressed in the nervous system, prostate, kidney, and small intestine (1, 2). The enzyme is also known as glutamate carboxypeptidase II (GCPII), folate hydrolase 1, folypoly-gamma-glutamate carboxypeptidase (FGCP), and N-acetylated-alpha-linked acidic dipeptidase I (NAALADase I). In the brain, PSMA hydrolyzes the neurotransmitter N-acetyl-Asp-Glu to produce glutamate, another neurotransmitter. Inhibition of brain PSMA activity is considered to be a promising approach for the treatment of neurological disorders associated with glutamate excitotoxicity, such as stroke, chronic pain, and amyotrophic lateral sclerosis (3). Intestinal PSMA hydrolyzes folypoly-γ-glutamates, facilitating the uptake of folate (4).

References:

1. Silver, D.A. *et al.* (1997) Clin. Cancer Res. **3**:81.
2. Carter, R.E. *et al.* (1996) Proc. Natl. Acad. Sci. USA. **93**:749.
3. Jackson, P.F. and Slusher, B.S. (2001) Curr. Med. Chem. **8**:949.
4. Heston, W.D. (1997) Urology **49**:104.

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