

Product datasheet for **AM20199AF-N**

PSMA (FOLH1) Mouse Monoclonal Antibody [Clone ID: 107-1A4]

Product data:

Product Type:	Primary Antibodies
Clone Name:	107-1A4
Applications:	FC
Recommended Dilution:	Flow Cytometry: 10 µg/ml (final concentration). Positive Control: LNCaP cell. Detailed procedure is provided in Protocols .
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	LNCaP cell homogenate.
Specificity:	This antibody reacts with PSMA (100 kDa) on Flow Cytometry.
Formulation:	PBS, pH 7.2 containing 50% Glycerol without preservatives State: Azide Free State: Liquid purified IgG fraction
Concentration:	lot specific
Purification:	Protein-A Agarose Chromatography of hybridoma supernatant
Conjugation:	Unconjugated
Storage:	Store the antibody (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	folate hydrolase (prostate-specific membrane antigen) 1
Database Link:	Entrez Gene 2346 Human Q04609



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Background: PSMA is a type II transmembrane protein expressed at high levels in prostate cancer and in tumor-associated neovasculature. PSMA is also known as a glutamate carboxypeptidase II (EC 3.4.17.21) that hydrolyzes the neuropeptide, N-acetyl-L-aspartyl-L-glutamate, releasing glutamate, the dominant excitatory neurotransmitter/neuromodulator of the mammalian central nervous system. The ability of PSMA to liberate g-glutamate may allow the removal of glutamate residues from dietary folates, which are unable to be transported into cells in their poly-g-glutamate form. Overexpression of PSMA in prostate cancer cells may represent an advantageous adaptation that allows the uptake of folates required for rapid division. The exopeptidase activity exhibited by PSMA and its high-level overexpression in prostate cancer cells make it a potential target for selective anticancer therapy and prodrug activation.

Synonyms: Glutamate carboxypeptidase 2, Folate hydrolase 1, Prostate-specific membrane antigen, FOLH, NAALAD1, PSM, GCP2, NAALAdase

Note: This product was originally produced by MBL International.

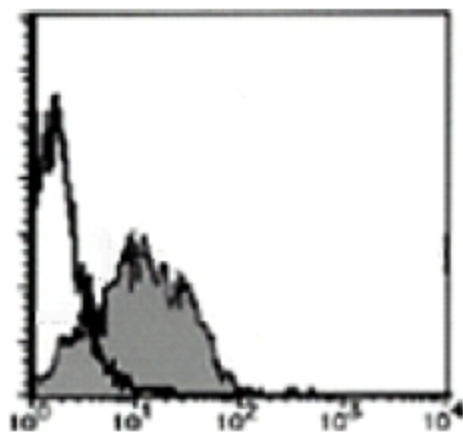
Protocol: **Flow Cytometric analysis for floating cells**

We usually use Fisher tubes or equivalents as reaction tubes for all steps described below.

- 1) Detach the cells from culture dish by using cell dissociation buffer
- 2) Wash the cells 3 times with washing buffer [PBS containing 2% fetal calf serum (FCS) and 0.1% NaN₃].
- 3) Resuspend the cells with washing buffer (5x10⁶ cells/mL).
- 4) Add 50 µL of the cell suspension into each tube, and centrifuge at 500 x g for 1 minute at room temperature (20~25°C). Remove supernatant by careful aspiration.
- 5) Add 20 µL of normal goat serum containing 1 mg/mL normal human IgG and 0.1% NaN₃ or 20 µL of Clear Back (human Fc receptor blocking reagent) to the cell pellet after tapping. Mix well and incubate for 5 minutes at room temperature.
- 6) Add 30 µL of the primary antibody at the concentration of as suggest in the APPLICATIONS diluted in the washing buffer. Mix well and incubate for 30 minutes at room temperature.
- 7) Add 1 mL of the washing buffer followed by centrifugation at 500 x g for 1 minute at room temperature. Remove supernatant by careful aspiration.
- 8) Add 30 µL of 1:100 FITC conjugated anti-mouse IgG diluted with the washing buffer. Mix well and incubate for 15 minutes at room temperature.
- 9) Add 1 mL of the washing buffer followed by centrifugation at 500 x g for 1 minute at room temperature. Remove supernatant by careful aspiration.
- 10) Resuspend the cells with 500 µL of the washing buffer and analyze by a flow cytometer.

Positive Control: LNCaP

Protein Families: Druggable Genome, Protease, Transmembrane

Product images:

Flow Cytometry: Analysis of PSMA expression on LNCaP cells. Open histograms indicate the reaction of isotypic control to the cells. Shaded histograms indicate the reaction of AM20199AF-N PSMA antibody to the cells.