For Research Use Only.
Not for use in diagnostic procedures.

MBL
A JSR Life Sciences Company

MONOCLONAL ANTIBODY

PE labeled Anti-PSMA

Code No.	Clone	Subclass	Quantity
K0142-5	107-1A4	Mouse IgG1	1 mL (50 tests)

BACKGROUND: Prostate-specific membrane antigen (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 γ-glutamate may allow the removal of glutamate residues from dietary folates, which are unable to be transported into cells in their poly-γ-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.

SOURCE: This antibody was purified from hybridoma (clone 107-1A4) supernatant using protein A agarose. This hybridoma was established by fusion of mouse myeloma cell Sp2/0 with Balb/c mouse splenocyte immunized with LNCaP cell homogenate.

FORMULATION: 50 tests in 1 mL volume of PBS containing 1% BSA and 0.09% NaN_3.
*Azide may react with copper or lead in plumbing system to form explosive metal azides. Therefore, always flush plenty of water when disposing materials containing azide into drain.

STORAGE: This antibody solution is stable for one year from the date of purchase when stored at 4°C.

REACTIVITY: This antibody reacts with PSMA on Flow cytometry.

APPLICATION:
Flow cytometry; 20 µL (ready for use)
*Please refer to the data sheet (MBL; code no. K0142-3) for other applications.

Detailed procedure is provided in the following **PROTOCOL**.

INTENDED USE:
For Research Use Only. Not for use in diagnostic procedures.

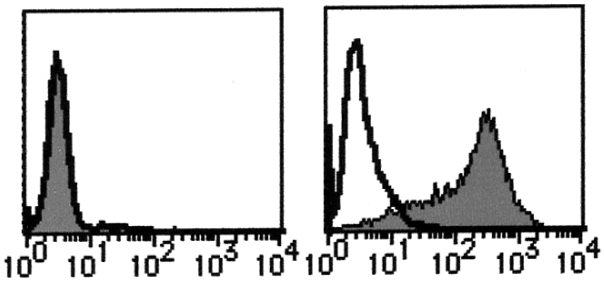
SPECIES CROSS REACTIVITY:

Species	Human	Mouse	Rat
Cell	LNCaP	Not Tested	Not Tested
Reactivity on FCM	+		

REFERENCES:
1) Wang, S., *et al., Int. J. Cancer* **92**, 871-876 (2001)
2) Brown, L.G., *et al*., *Prostate Cancer Prostatic Dis*. **1**, 208-215 (1998)

Clone 107-1A4 is used in these references.

RELATED PRODUCTS:
Please visit our web site https://ruo.mbl.co.jp/



Flow cytometric analysis of PSMA expression on LNCaP cells (right) and Jurkat cells (left). *Open histogram indicate the reaction of isotypic control to the cells. Shaded histograms indicate the reaction of K0142-5 to the cells.*

The descriptions of the following protocols are examples. Each user should determine the appropriate condition.

PROTOCOL:
Flow cytometric analysis for adherent cells
We usually use Fisher tubes or equivalents as reaction tubes for all steps after 2).
1) Detach the cells from culture dish by using cell dissociation buffer (Invitrogen; code no. 13151-014).
2) Wash the cells 3 times with washing buffer [PBS containing 2% fetal calf serum (FCS) and 0.1% NaN_3].
3) Resuspend the cells with washing buffer ($5x10^6$ 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 (20~25ºC). Remove supernatant by careful aspiration.
5) Add 20 μL of Clear Back (human Fc receptor blocking reagent, MBL; code no. MTG-001) to the cell pellet after tapping. Mix well and incubate for 5 minutes at room temperature.
6) Add 20 μL of the PE labeled anti-PSMA monoclonal antibody (107-1A4). 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) Resuspend the cells with 500 μL of the washing buffer and analyze by a flow cytometer.

(Positive control for Flow cytometry; LNCaP)