

# PSM (Y-PSMA2): sc-69665

## BACKGROUND

Prostate cancer is the most frequently diagnosed cancer and the early detection of prostate cancer dramatically and efficiently reduces the observed mortality rate. Several proteins have been identified as specific markers of prostate cancer, and they may be useful as diagnostic indicators. PSA, prostate-specific antigen, is the classical indicator for transformed prostate tissue; however, in addition to being upregulated in prostate cancer, PSA is also upregulated in non-malignant conditions, such as benign prostatic hyperplasia prostate. Conversely, STEAP (six-transmembrane epithelial antigen of the prostate), prostate carcinoma tumor antigen (PCTA-1) and prostate-specific membrane antigen (PSM) represent additional prostate-specific antigens that are overexpressed only in malignant tumors and therefore are more specific identifiers of malignancies. PSM is an integral membrane protein, and PCTA-1 is related to the galectin gene family, which mediate both cell-cell and cell-matrix interactions in a manner similar to the selectin subgroup of C-type lectins. STEAP is a serpentine transmembrane cell-surface tumor antigen that is predicted to function as a channel or transporter protein. In addition to prostate cancers, STEAP is also upregulated in bladder, colon and ovarian cancers.

## CHROMOSOMAL LOCATION

Genetic locus: FOLH1 (human) mapping to 11p11.12.

## SOURCE

PSM (Y-PSMA2) is a mouse monoclonal antibody raised against a crude membrane protein preparation from pooled prostate malignant carcinoma of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PSM (Y-PSMA2) is recommended for detection of PSM expressed LNCaP cell lines of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PSM siRNA (h): sc-40890, PSM shRNA Plasmid (h): sc-40890-SH and PSM shRNA (h) Lentiviral Particles: sc-40890-V.

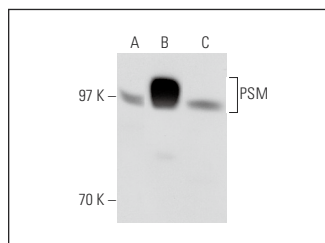
Molecular Weight of PSM: 100 kDa.

Positive Controls: LNCaP whole cell lysate: sc-2231, Jurkat whole cell lysate: sc-2204 or PSM (h): 293T Lysate: sc-114038.

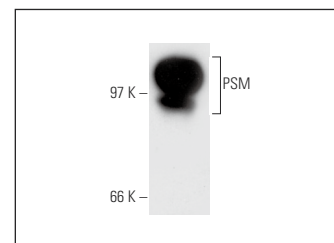
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



PSM (YPSMA2): sc-69665. Western blot analysis of PSM expression in non-transfected 293T: sc-117752 (A), human PSM transfected 293T: sc-114038 (B) and Jurkat (C) whole cell lysates.



PSM (Y-PSMA2): sc-69665. Western blot analysis of PSM expression in LNCaP whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Matsuoka, T., et al. 2012. Detection of tumor markers in prostate cancer and comparison of sensitivity between real time and nested PCR. *Kobe J. Med. Sci.* 58: E51-E59.
2. Ren, H., et al. 2014. Prostate-specific membrane antigen as a marker of pancreatic cancer cells. *Med. Oncol.* 31: 857.
3. Tykvar, J., et al. 2014. Comparative analysis of monoclonal antibodies against prostate-specific membrane antigen (PSMA). *Prostate* 74: 1674-1690.
4. Sommer, U., et al. 2022. Impact of androgen receptor activity on prostate-specific membrane antigen expression in prostate cancer cells. *Int. J. Mol. Sci.* 23: 1046.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.