

# PSM (k1H7): sc-130546

## 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.

## REFERENCES

1. Pretlow, T.G., et al. 1991. Tissue concentrations of prostate-specific antigen in prostatic carcinoma and benign prostatic hyperplasia. *Int. J. Cancer* 49: 645-649.
2. Israeli, R.S., et al. 1993. Molecular cloning of a complementary DNA encoding a prostate-specific membrane antigen. *Cancer Res.* 53: 227-230.
3. Leek, J., et al. 1995. Prostate-specific membrane antigen: evidence for the existence of a second related human gene. *Br. J. Cancer* 72: 583-588.
4. Su, Z.Z., et al. 1996. Surface-epitope masking and expression cloning identifies the human prostate carcinoma tumor antigen gene PCTA-1, a member of the galectin gene family. *Proc. Natl. Acad. Sci. USA* 93: 7252-7257.
5. Wang, F.L., et al. 1996. Two differentially expressed genes in normal human prostate tissue and in carcinoma. *Cancer Res.* 56: 3634-3637.
6. Reiter, R.E., et al. 1998. Prostate stem cell antigen: a cell surface marker overexpressed in prostate cancer. *Proc. Natl. Acad. Sci. USA* 95: 1735-1740.

## CHROMOSOMAL LOCATION

Genetic locus: FOLH1 (human) mapping to 11p11.12; Folh1 (mouse) mapping to 7 D3.

## SOURCE

PSM (k1H7) is a mouse monoclonal antibody raised against amino acids 117-351 of recombinant PSM of human origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

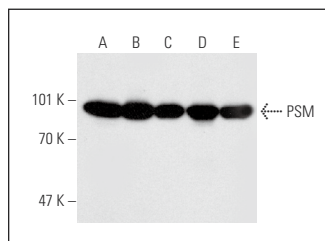
PSM (k1H7) is recommended for detection of PSM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PSM siRNA (h): sc-40890, PSM siRNA (m): sc-40891, PSM shRNA Plasmid (h): sc-40890-SH, PSM shRNA Plasmid (m): sc-40891-SH, PSM shRNA (h) Lentiviral Particles: sc-40890-V and PSM shRNA (m) Lentiviral Particles: sc-40891-V.

Molecular Weight of PSM: 100 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, LNCaP whole cell lysate: sc-2231 or Hep G2 cell lysate: sc-2227.

## DATA



PSM (k1H7): sc-130546. Western blot analysis of PSM expression in LNCaP (A), DU 145 (B), AT-3 (C), Hep G2 (D) and Caki-1 (E) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Wang, D.G., et al. 2014. Anti-tumor activity of the X-linked inhibitor of apoptosis (XIAP) inhibitor embelin in gastric cancer cells. *Mol. Cell. Biochem.* 386: 143-152.
2. Wang, D., et al. 2018. Antiproliferative effects of the CDK6 inhibitor PD0332991 and its effect on signaling networks in gastric cancer cells. *Int. J. Mol. Med.* 41: 2473-2484.

## STORAGE

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

## 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.