

PSM (E-18): sc-10269

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.

CHROMOSOMAL LOCATION

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

SOURCE

PSM (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PSM of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10269 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

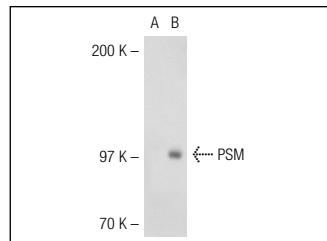
PSM (E-18) is recommended for detection of PSM of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) 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 shRNA Plasmid (h): sc-40890-SH and PSM shRNA (h) Lentiviral Particles: sc-40890-V.

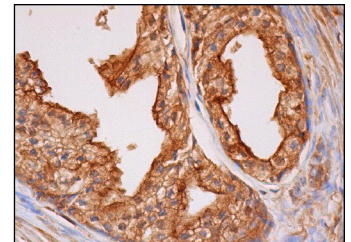
Molecular Weight of PSM: 100 kDa.

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

DATA



PSM (E-18): sc-10269. Western blot analysis of PSM expression in non-transfected: sc-117752 (A) and human PSM transfected: sc-114038 (B) 293T whole cell lysates.



PSM (E-18): sc-10269. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Bernard, D., et al. 2003. Myc confers androgen-independent prostate cancer cell growth. *J. Clin. Invest.* 112: 1724-1731.
2. Laidler, P., et al. 2005. Expression of prostate specific membrane antigen in androgen-independent prostate cancer cell line PC-3. *Arch. Biochem. Biophys.* 435: 1-14.
3. Liu, C., et al. 2009. Prostate-specific membrane antigen retargeted measles virotherapy for the treatment of prostate cancer. *Prostate* 69: 1128-1141.

RESEARCH USE

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


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Try **PSM (F-2): sc-514444** or **PSM (k1H7): sc-130546**, our highly recommended monoclonal alternatives to PSM (E-18).