

PSM (h): 293T Lysate: sc-114038

BACKGROUND

Prostate cancer is the most frequently-diagnosed cancer and its early detection 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 mediates 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.
7. Hubert, R.S., et al. 1999. STEAP: a prostate-specific cell-surface antigen highly expressed in human prostate tumors. *Proc. Natl. Acad. Sci. USA* 96: 14523-14528.

CHROMOSOMAL LOCATION

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

PRODUCT

PSM (h): 293T Lysate represents a lysate of human PSM transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

PSM (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PSM antibodies. Recommended use: 10-20 µl per lane.

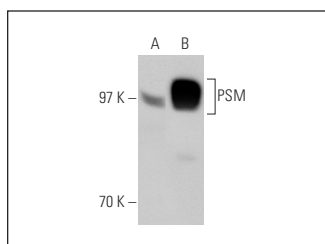
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PSM (YPSMA2): sc-69665 is recommended as a positive control antibody for Western Blot analysis of enhanced human PSM expression in PSM transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

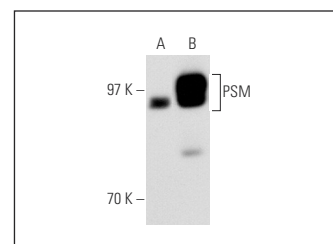
RECOMMENDED SUPPORT REAGENTS

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.

DATA



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



PSM (YPSMA-1): sc-59674. Western blot analysis of PSM expression in non-transfected: sc-117752 (A) and human PSM transfected: sc-114038 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.