

Prostein (S-12): sc-49711

BACKGROUND

PSA, prostate specific antigen, is the classic 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. Prostein, also designated Prostate cancer-associated protein 6, is a prostate-specific, 553 amino acid transmembrane protein that is upregulated by androgens. It is considered a marker for prostate cells since it is expressed in all prostatic glandular cells as well as in normal and cancerous prostate tissues. Since it is able to elicit a tumor-directed cytotoxic T cell response, Prostein may be used as a target for the development of PSA- and T cell-based therapeutic strategies for prostate cancer.

REFERENCES

- Xu, J., Kalos, M., Stolk, J.A., Zasloff, E.J., Zhang, X., Houghton, R.L., Filho, A.M., Nolasco, M., Badaró, R. and Reed, S.G. 2001. Identification and characterization of Prostein, a novel prostate-specific protein. *Cancer Res.* 61: 1563-1568.
- Friedman, R.S., Spies, A.G. and Kalos, M. 2004. Identification of naturally processed CD8 T cell epitopes from Prostein, a prostate tissue-specific vaccine candidate. *Eur. J. Immunol.* 34: 1091-1101.
- Hsia, N. and Cornwall, G.A. 2004. DNA microarray analysis of region-specific gene expression in the mouse epididymis. *Biol. Reprod.* 70: 448-457.
- Kalos, M., Askaa, J., Hylander, B.L., Repasky, E.A., Cai, F., Vedvick, T., Reed, S.G., Wright, G.L. and Fanger, G.R., Jr. 2004. Prostein expression is highly restricted to normal and malignant prostate tissues. *Prostate* 60: 246-256.
- Kiessling, A., Stevanovic, S., Füssel, S., Weigle, B., Rieger, M.A., Temme, A., Rieber, E.P. and Schmitz, M. 2004. Identification of an HLA-A*0201-restricted T-cell epitope derived from the prostate cancer-associated protein prostein. *Br. J. Cancer* 90: 1034-1040.
- Edwards, S., Campbell, C., Flohr, P., Shipley, J., Giddings, I., Te-Poele, R., Dodson, A., Foster, C., Clark, J., Jhavar, S., Kovacs, G. and Cooper, C.S. 2005. Expression analysis onto microarrays of randomly selected cDNA clones highlights HOXB13 as a marker of human prostate cancer. *Br. J. Cancer* 92: 376-381.
- Cunha, A.C., Weigle, B., Kiessling, A., Bachmann, M. and Rieber, E.P. 2006. Tissue-specificity of prostate specific antigens: Comparative analysis of transcript levels in prostate and non-prostatic tissues. *Cancer Lett.* 236: 229-238.
- Fuessel, S., Meye, A., Schmitz, M., Zastrow, S., Linne, C., Richter, K., Löbel, B., Hakenberg, O.W., Hoelig, K., Rieber, E.P. and Wirth, M.P. 2006. Vaccination of dendritic cells: results of a phase I clinical trial. *Prostate* 66: 811-821.

CHROMOSOMAL LOCATION

Genetic locus: SLC45A3 (human) mapping to 1q32.1; Slc45a3 (mouse) mapping to 1 E4.

SOURCE

Prostein (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Prostein 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-49711 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Prostein (S-12) is recommended for detection of Prostein of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Prostein (S-12) is also recommended for detection of Prostein in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Prostein siRNA (h): sc-61413, Prostein siRNA (m): sc-61414, Prostein shRNA Plasmid (h): sc-61413-SH, Prostein shRNA Plasmid (m): sc-61414-SH, Prostein shRNA (h) Lentiviral Particles: sc-61413-V and Prostein shRNA (m) Lentiviral Particles: sc-61414-V.

Molecular Weight of Prostein: 59 kDa.

Positive Controls: mouse testis extract: sc-2405.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **Prostein (A-5): sc-393069** or **Prostein (E-5): sc-390873**, our highly recommended monoclonal alternatives to Prostein (S-12).