

# PSCA (7F5): sc-80654

## BACKGROUND

Prostate stem cell antigen (PSCA) is a 123 amino acid glycosylated protein that shares homology with the Thy-1/Ly-6 family of glycosyl-phosphatidylinositol (GPI)-anchored cell surface antigens. The human PSCA gene maps to chromosome 8q24.3 and transcripts are most prevalent in prostate and placenta. The gene encoding c-Myc is also located on chromosome 8q and, like PSCA, is overexpressed in a large number of prostate cancers. Transcripts for PSCA are also abundant in urothelial tumors, and levels of PSCA transcripts increase in confluent RT112 bladder carcinomas, suggesting that PSCA is a marker for urothelial and gastric tissue carcinogenesis. Among prostate cancer cell surface antigens, PSCA is expressed in over 80% of prostate carcinomas and correlates well to certain prostate cancer phenotypes, such as prostate cancer bone metastases.

## CHROMOSOMAL LOCATION

Genetic locus: PSCA (human) mapping to 8q24.3.

## SOURCE

PSCA (7F5) is a mouse monoclonal antibody raised against P815 cells expressing PSCA of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PSCA (7F5) is available conjugated to agarose (sc-80654 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-80654 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-80654 PE), fluorescein (sc-80654 FITC), Alexa Fluor<sup>®</sup> 488 (sc-80654 AF488), Alexa Fluor<sup>®</sup> 546 (sc-80654 AF546), Alexa Fluor<sup>®</sup> 594 (sc-80654 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-80654 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-80654 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-80654 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

PSCA (7F5) is recommended for detection of PSCA of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for PSCA siRNA (h): sc-42958, PSCA shRNA Plasmid (h): sc-42958-SH and PSCA shRNA (h) Lentiviral Particles: sc-42958-V.

Molecular Weight of PSCA: 29 kDa.

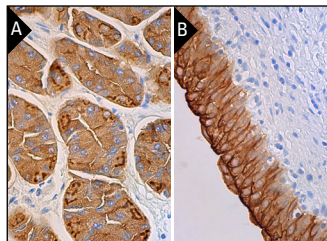
## STORAGE

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.

## DATA



PSCA (7F5): sc-80654. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing membrane and cytoplasmic staining of urothelial cells (B).

## SELECT PRODUCT CITATIONS

- Puhr, M., et al. 2012. Epithelial-to-mesenchymal transition leads to docetaxel resistance in prostate cancer and is mediated by reduced expression of miR-200c and miR-205. *Am. J. Pathol.* 181: 2188-2201.
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- Mai, T.J., et al. 2016. Construction of a fusion plasmid containing the PSCA gene and cytotoxic T-lymphocyte associated antigen-4 (CTLA-4) and its anti-tumor effect in an animal model of prostate cancer. *Braz. J. Med. Biol. Res.* 49: e5620.
- Kessler, C., et al. 2017. Novel PSCA targeting scFv-fusion proteins for diagnosis and immunotherapy of prostate cancer. *J. Cancer Res. Clin. Oncol.* 143: 2025-2038.
- Wu, D., et al. 2020. PSCA is a target of chimeric antigen receptor T cells in gastric cancer. *Biomark. Res.* 8: 3.
- Zhang, X., et al. 2020. Proteomic profiling of two distinct populations of extracellular vesicles isolated from human seminal plasma. *Int. J. Mol. Sci.* 21: 7957.
- Song, G., et al. 2022. Single-cell transcriptomic analysis suggests two molecularly subtypes of intrahepatic cholangiocarcinoma. *Nat. Commun.* 13: 1642.

## PROTOCOLS

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