SANTA CRUZ BIOTECHNOLOGY, INC.

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 metastates.

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 IgG1 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® 488 (sc-80654 AF488), Alexa Fluor® 546 (sc-80654 AF546), Alexa Fluor® 594 (sc-80654 AF594) or Alexa Fluor® 647 (sc-80654 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-80654 AF680) or Alexa Fluor® 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 μ g per 1 x 10⁶ 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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- 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.
- 4. 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.
- 7. Stabell, A.R., et al. 2023. Single-cell transcriptomics of human-skinequivalent organoids. Cell Rep. 42: 112511.
- Zhang, X., et al. 2024. Extracellular vesicles from seminal plasma interact with T cells in vitro and drive their differentiation into regulatory T-cells. J. Extracell. Vesicles 13: e12457.

PROTOCOLS

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