

# STEAP (H-105): sc-25514

## BACKGROUND

Six-transmembrane epithelial antigen of the prostate (STEAP) is structurally similar to a channel or transport protein. STEAP protein contains six potential membrane-spanning regions with hydrophilic amino- and carboxyl-terminal domains. STEAP protein is present in human prostate tissue with elevated levels in cancer cell lines, including prostate, bladder, colon, ovarian and Ewing sarcoma. Cell-cell junctions of the secretory epithelium show concentrated levels of STEAP protein. Mouse STEAP is 80% homologous to human STEAP at both the nucleotide and amino acid levels. The human STEAP gene maps to chromosome 7q21.13 and encodes a 339 amino acid protein.

## REFERENCES

1. 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.
2. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604415. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: STEAP1 (human) mapping to 7q21.13; Steap1 (mouse) mapping to 5 A1.

## SOURCE

STEAP (H-105) is a rabbit polyclonal antibody raised against amino acids 1-105 mapping at the N-terminus of STEAP 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.

## STORAGE

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

## APPLICATIONS

STEAP (H-105) is recommended for detection of STEAP of mouse, rat and 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 STEAP siRNA (h): sc-36571, STEAP siRNA (m): sc-43534, STEAP shRNA Plasmid (h): sc-36571-SH, STEAP shRNA Plasmid (m): sc-43534-SH, STEAP shRNA (h) Lentiviral Particles: sc-36571-V and STEAP shRNA (m) Lentiviral Particles: sc-43534-V.

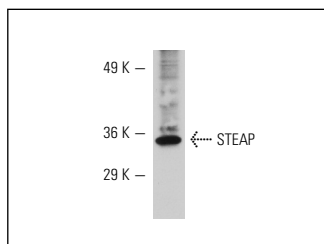
Molecular Weight of STEAP: 36 kDa.

Positive Controls: LNCaP cell lysate: sc-2231.

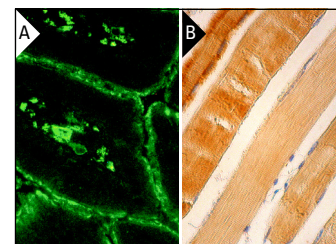
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



STEAP (H-105): sc-25514. Western blot analysis of STEAP expression in LNCaP whole cell lysate.



STEAP (H-105): sc-25514. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (B).

## SELECT PRODUCT CITATIONS

1. Klein, A., et al. 2005. Gene expression profiling: cell cycle deregulation and aneuploidy do not cause breast cancer formation in WAP-SVT/t transgenic animals. *J. Mol. Med.* 83: 362-376.
2. Azumi, M., et al. 2010. Six-transmembrane epithelial antigen of the prostate as an immunotherapeutic target for renal cell and bladder cancer. *J. Urol.* 183: 2036-2044.
3. Grunewald, T.G., et al. 2012. High STEAP1 expression is associated with improved outcome of Ewing's sarcoma patients. *Ann. Oncol.* 23: 2185-2190.
4. Rick, F.G., et al. 2012. Combining growth hormone-releasing hormone antagonist with luteinizing hormone-releasing hormone antagonist greatly augments benign prostatic hyperplasia shrinkage. *J. Urol.* 187: 1498-1504.

## RESEARCH USE

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



Try **STEAP (B-4): sc-271872** or **STEAP (H-6): sc-515351**, our highly recommended monoclonal alternatives to STEAP (H-105).