

STEAP (L-15): sc-10262

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™. 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, STEAP1B (human) mapping to 7p15.3.

SOURCE

STEAP (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-10262 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

STEAP (L-15) is recommended for detection of STEAP and MGC87042 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

STEAP (L-15) is also recommended for detection of STEAP and MGC87042 in additional species, including porcine.

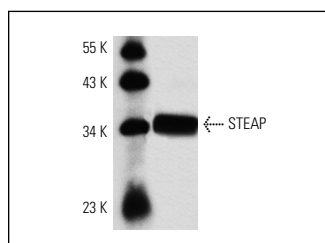
Molecular Weight of STEAP: 36 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or A-431 whole cell lysate: sc-2201.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



STEAP (L-15): sc-10262. Western blot analysis of STEAP expression in LNCaP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Vaghjani, R.J., et al. 2009. Six-transmembrane epithelial antigen of the prostate (STEAP1 and STEAP2)-differentially expressed by murine and human mesenchymal stem cells. *Tissue Eng. Part A* 15: 2073-2083.

RESEARCH USE

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

PROTOCOLS

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



Try **STEAP (B-4): sc-271872** or **STEAP (H-6): sc-515351**, our highly recommended monoclonal alternatives to STEAP (L-15).