SANTA CRUZ BIOTECHNOLOGY, INC.

STEAP2 (N-16): sc-82365

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The Power to Question

BACKGROUND

STEAP2 (6 transmembrane epithelial antigen of the prostate 2), also known as STMP, IPCA1, PUMPCn, STAMP1 or PCANAP1, is a 490 amino acid multi-pass membrane protein that localizes to the cell membrane and the endosomal membrane, as well as to the Golgi and to vesicular tubular structures in the cytosol. Highly expressed in prostate and present at lower levels in kidney, heart, ovary, brain and pancreas, STEAP2 contains one ferric oxidoreductase domain and, using FAD as a cofactor, functions as a metalloreductase that is able to reduce both Cu^{2+} and Fe^{3+} to Cu^{1+} and Fe^{2+}, respectively, thereby playing a role in iron and copper metabolism. Overexpression of STEAP2 is associated with the progression of prostate cancer, suggesting a role for STEAP2 in tumorigenesis. Multiple isoforms of STEAP2 exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: STEAP2 (human) mapping to 7q21.13; Steap2 (mouse) mapping to 5 A1.

SOURCE

STEAP2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of STEAP2 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-82365 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

STEAP2 (N-16) is recommended for detection of STEAP2 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).

STEAP2 (N-16) is also recommended for detection of STEAP2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for STEAP2 siRNA (h): sc-76587, STEAP2 siRNA (m): sc-76588, STEAP2 shRNA Plasmid (h): sc-76587-SH, STEAP2 shRNA Plasmid (m): sc-76588-SH, STEAP2 shRNA (h) Lentiviral Particles: sc-76587-V and STEAP2 shRNA (m) Lentiviral Particles: sc-76588-V.

Molecular Weight of STEAP2: 56 kDa.

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.

PROTOCOLS

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