SANTA CRUZ BIOTECHNOLOGY, INC.

PMEPA1 (P-15): sc-85829

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The Power to Question

BACKGROUND

PMEPA1 (prostate transmembrane protein, androgen induced 1), also known as STAG1 or TMEPAI, is a 287 amino acid single-pass membrane protein that contains WW-binding motifs and localizes to the cell membrane. Expressed at high levels in prostate and ovary, PMEPA1 interacts with NEDD4 and may play a role in regulating AR (androgen receptor) levels, specifically in prostate cells. Down regulation of PMEPA1 is observed in prostate tumors, suggesting that PMEPA1 may exhibit activity as a tumor suppressor. PMEPA1 exists as multiple alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

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2. Xu, L.L., et al. 2000. A novel androgen-regulated gene, PMEPA1, located on chromosome 20q13 exhibits high level expression in prostate. Genomics 66: 257-263.
3. Rae, F.K., et al. 2001. Characterization of a novel gene, STAG1/PMEPA1, upregulated in renal cell carcinoma and other solid tumors. Mol. Carcinog. 32: 44-53.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606564. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Brunschwig, E.B., et al. 2003. PMEPA1, a transforming growth factor-β-induced marker of terminal colonocyte differentiation whose expression is maintained in primary and metastatic colon cancer. Cancer Res. 63: 1568-1575.
6. Xu, L.L., et al. 2003. PMEPA1, an androgen-regulated NEDD4-binding protein, exhibits cell growth inhibitory function and decreased expression during prostate cancer progression. Cancer Res. 63: 4299-4304.
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8. Richter, E., et al. 2007. A role for DNA methylation in regulating the growth suppressor PMEPA1 gene in prostate cancer. Epigenetics 2: 100-109.
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CHROMOSOMAL LOCATION

Genetic locus: PMEPA1 (human) mapping to 20q13.31; Pmepa1 (mouse) mapping to 2 H3.

SOURCE

PMEPA1 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of PMEPA1 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-85829 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PMEPA1 (P-15) is recommended for detection of PMEPA1 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).

PMEPA1 (P-15) is also recommended for detection of PMEPA1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PMEPA1 siRNA (h): sc-76176, PMEPA1 siRNA (m): sc-152344, PMEPA1 shRNA Plasmid (h): sc-76176-SH, PMEPA1 shRNA Plasmid (m): sc-152344-SH, PMEPA1 shRNA (h) Lentiviral Particles: sc-76176-V and PMEPA1 shRNA (m) Lentiviral Particles: sc-152344-V.

Molecular Weight of PMEPA1: 32 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.