SANTA CRUZ BIOTECHNOLOGY, INC.

ACPT (N-15): sc-138830

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ACPT (acid phosphatase, testicular) is a 426 amino acid single-pass type I membrane protein belonging to the histidine acid phosphatase family. Encoded by a gene that maps to human chromosome 19q13.33, ACPT is highly expressed in testis, with significantly lower expression in testicular cancer tissues than in normal testicular tissues. ACPT is also expressed in brain, trachea, prostate, bone marrow, spinal cord, colon, fetal brain, heart, thymus, fetal liver, spleen, leukocytes, ovary, small intestine, pancreas and skeletal muscle. ACPT exhibits membrane subcellular localization, exists as three alternatively spliced isoforms and likely contains a homodimer subunit structure. ACPT dephosphorylates receptor tyrosine-protein kinase ErbB-4 and inhibits ligand-induced proteolytic cleavage. ACPT is up-regulated by mibolerone (a synthetic androgen) and dihydrotestosterone (DHT) and, is down-regulated by estrogen and progestin.

REFERENCES

1. Diamandis, E.P., et al. 2001. Human tissue kallikrein gene family: a rich source of novel disease biomarkers. Expert Rev. Mol. Diagn. 1: 182-190.
2. Yousef, G.M., et al. 2001. Molecular cloning of a novel human acid phosphatase gene (ACPT) that is highly expressed in the testis. Genomics 74: 385-395.
3. Diamandis, E.P., et al. 2002. Human tissue kallikreins: a family of new cancer biomarkers. Clin. Chem. 48: 1198-1205.
4. Yousef, G.M., et al. 2002. Expanded human tissue kallikrein family—a novel panel of cancer biomarkers. Tumour Biol. 23: 185-192.
5. Luo, L.Y., et al. 2003. Human tissue kallikreins and testicular cancer. APMIS 111: 225-232.
6. Yousef, G.M., et al. 2003. Genomic overview of serine proteases. Biochem. Biophys. Res. Commun. 305: 28-36.

CHROMOSOMAL LOCATION

Genetic locus: ACPT (human) mapping to 19q13.33; Acpt (mouse) mapping to 7 B4.

SOURCE

ACPT (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of ACPT 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-138830 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

ACPT (N-15) is recommended for detection of ACPT of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACPT (N-15) is also recommended for detection of ACPT in additional species, including canine and porcine.

Suitable for use as control antibody for ACPT siRNA (h): sc-97507, ACPT siRNA (m): sc-140824, ACPT shRNA Plasmid (h): sc-97507-SH, ACPT shRNA Plasmid (m): sc-140824-SH, ACPT shRNA (h) Lentiviral Particles: sc-97507-V and ACPT shRNA (m) Lentiviral Particles: sc-140824-V.

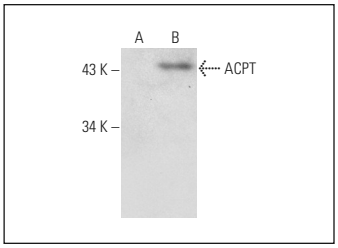
Molecular Weight of ACPT: 46 kDa.

Positive Controls: ACPT (h): 293T Lysate: sc-127925.

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



ACPT (N-15): sc-138830. Western blot analysis of ACPT expression in non-transfected: sc-117752 (**A**) and human ACPT transfected: sc-127925 (**B**) 293T whole cell lysates.

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.