

ARPP-21 (E-13): sc-102327

BACKGROUND

ARPP-21, also known as RCS or TARPP (thymocyte cAMP-regulated phosphoprotein), is an 812 amino acid protein that localizes to the cytoplasm and contains one R3H domain. Expressed as six alternatively spliced isoforms that are found in immature thymocyte and brain tissue, ARPP-21 interacts with CaM I (calmodulin 1) and is thought to function as a competitive inhibitor of CaM-dependent enzymes, such as calcineurin. Human ARPP-21 shares 89% sequence similarity with its rat and bovine counterparts, suggesting a conserved role between species. The gene encoding ARPP-21 localizes to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

- Kurihara, T., et al. 1989. ARPP-21, a cyclic AMP-regulated phosphoprotein enriched in dopamine-innervated brain regions. II. Molecular cloning and nucleotide sequence. *J. Neurosci.* 9: 3638-3644.
- Brené, S., et al. 1994. Expression of mRNAs encoding ARPP-16/19, ARPP-21, and DARPP-32 in human brain tissue. *J. Neurosci.* 14: 985-998.
- Ivkovic, S., et al. 1996. ARPP-21: murine gene structure and promoter identification of a neuronal phosphoprotein enriched in the limbic striatum. *Brain Res.* 709: 10-16.
- Ivkovic, S. and Ehrlich, M.E. 1999. Expression of the striatal DARPP-32/ARPP-21 phenotype in GABAergic neurons requires neurotrophins *in vivo* and *in vitro*. *J. Neurosci.* 19: 5409-5419.
- Caporaso, G.L., et al. 2000. Drugs of abuse modulate the phosphorylation of ARPP-21, a cyclic AMP-regulated phosphoprotein enriched in the basal ganglia. *Neuropharmacology* 39: 1637-1644.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605488. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: ARPP21 (human) mapping to 3p22.3; Arpp21 (mouse) mapping to 9 F3.

SOURCE

ARPP-21 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ARPP-21 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-102327 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

ARPP-21 (E-13) is recommended for detection of ARPP-21 of human and, to a lesser extent, mouse and rat 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); non cross-reactive with ARPP-21 isoform 5.

ARPP-21 (E-13) is also recommended for detection of ARPP-21 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ARPP-21 siRNA (h): sc-78154, ARPP-21 siRNA (m): sc-141271, ARPP-21 shRNA Plasmid (h): sc-78154-SH, ARPP-21 shRNA Plasmid (m): sc-141271-SH, ARPP-21 shRNA (h) Lentiviral Particles: sc-78154-V and ARPP-21 shRNA (m) Lentiviral Particles: sc-141271-V.

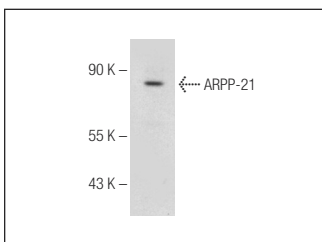
Molecular Weight of ARPP-21: 89 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233.

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. with UltraCruz™ Mounting Medium: sc-24941.

DATA



ARPP-21 (E-13): sc-102327. Western blot analysis of ARPP-21 expression in MOLT-4 whole cell lysate.

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.