SANTA CRUZ BIOTECHNOLOGY, INC.

QAPRTase (C-16): sc-67819

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BACKGROUND

Quinolinate phosphoribosyltransferase (QPRTase) is a major enzyme in the catabolism of quinolinate. Quinolinate is an intermediate in the tryptophan-nicotinamide adenine dinucleotide (NAD) pathway, leading to the production of nicotinic acid, carbon dioxide and pyrophosphate. Catabolism of quinolinate is vital due to the neurotoxicity of quinolinate. Increased levels of quinolinate have been linked to neurodegenerative symptoms associated with meningitis and AIDS. QAPRTase has a seven-stranded α/β barrel domain, which is similar in structure to the eight-stranded α/β barrel enzymes. The protein possesses a novel fold in comparison to other members of the PRTase family. This fold comprises a structure combining two domains. The structure is part α/β barrel-like domain and part α/β N-terminal domain.

REFERENCES

1. Eads, J.C., et al. 1997. A new function for a common fold: the crystal structure of quinolinic acid phosphoribosyltransferase. Structure 5: 47-58.
2. Cao, H., et al. 2002. Quinolinate phosphoribosyltransferase: kinetic mechanism for a type II PRTase. Biochemistry 41: 3520-3528.
3. Kim, M.K., et al. 2003. Crystallization and preliminary X-ray crystallographic analysis of quinolinate phosphoribosyltransferase of *Helicobacter pylori*. Acta Crystallogr. D Biol. Crystallogr. 59: 1265-1266.
4. Connor, S.C., et al. 2004. Development of a multivariate statistical model to predict peroxisome proliferation in the rat, based on urinary 1H-NMR spectral patterns. Biomarkers 9: 364-385.
5. Schwarzenbacher, R., et al. 2004. Crystal structure of a type II quinolic acid phosphoribosyltransferase (TM1645) from *Thermotoga maritima* at 2.50 A resolution. Proteins 55: 768-771.
6. Delaney, J., et al. 2005. Tryptophan-NAD^+ pathway metabolites as putative biomarkers and predictors of peroxisome proliferation. Arch. Toxicol. 79: 208-223.
7. Wang, K., et al. 2006. Involvement of quinolinate phosphoribosyl transferase in promotion of potato growth by a *Burkholderia* strain. Appl. Environ. Microbiol. 72: 760-768.
8. Wang, T., et al. 2006. Structure of Nampt/PBEF/visfatin, a mammalian NAD^+ biosynthetic enzyme. Nat. Struct. Mol. Biol. 13: 661-662.
9. Kim, M.K., et al. 2006. Crystal structure of quinolinic acid phosphoribosyltransferase from *Helicobacter pylori*. Proteins 63: 252-255.

CHROMOSOMAL LOCATION

Genetic locus: QPRT (human) mapping to 16p11.2; Qprt (mouse) mapping to 7 F3.

SOURCE

QAPRTase (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of QAPRTase of human origin.

RESEARCH USE

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

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-67819 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

QAPRTase (C-16) is recommended for detection of QAPRTase 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).

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

Suitable for use as control antibody for QAPRTase siRNA (h): sc-62914, QAPRTase siRNA (m): sc-62915, QAPRTase shRNA Plasmid (h): sc-62914-SH, QAPRTase shRNA Plasmid (m): sc-62915-SH, QAPRTase shRNA (h) Lentiviral Particles: sc-62914-V and QAPRTase shRNA (m) Lentiviral Particles: sc-62915-V.

Molecular Weight of QAPRTase: 30 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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.

PROTOCOLS

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