SANTA CRUZ BIOTECHNOLOGY, INC.

PRODH (Y-15): sc-79585

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The Power to Question

BACKGROUND

PRODH (proline dehydrogenase), also known as proline oxidase 2 (POX2), is a 516 amino acid protein belonging to the proline oxidase family. Induced during p53-induced apoptosis, PRODH catalyzes the first step in proline degradation by converting proline to δ-1-pyrroline-5-carboxylate. Defects in PRODH are the cause of hyperprolinemia type 1, a disorder characterized by elevated serum proline levels. Defects in PRODH may also be involved in the psychiatric and behavioral phenotypes associated with DiGeorge syndrome. Localized to the mitochondrion matrix, PRODH is expressed at higher levels in lung, brain and skeletal muscle and expressed at lower levels in heart, liver, kidney and pancreas. PRODH exists as two isoforms produced by alternative splicing.

REFERENCES

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3. Weksberg, R., et al. 2007. Molecular characterization of deletion breakpoints in adults with 22q11 deletion syndrome. Hum. Genet. 120: 837-845.
4. Raux, G., et al. 2007. Involvement of hyperprolinemia in cognitive and psychiatric features of the 22q11 deletion syndrome. Hum. Mol. Genet. 16: 83-91.
5. White, T.A., et al. 2007. Structure and kinetics of monofunctional proline dehydrogenase from *Thermus thermophilus*. J. Biol. Chem. 282: 14316-14327.
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7. Kempf, L., et al. 2008. Functional polymorphisms in PRODH are associated with risk and protection for schizophrenia and fronto-striatal structure and function. PLoS Genet. 4: e1000252.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 606810. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PRODH (human) mapping to 22q11.21; Prodh (mouse) mapping to 16 A3.

SOURCE

PRODH (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PRODH of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-79585 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PRODH (Y-15) is recommended for detection of PRODH 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).

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

Suitable for use as control antibody for PRODH siRNA (h): sc-76252, PRODH siRNA (m): sc-76253, PRODH shRNA Plasmid (h): sc-76252-SH, PRODH shRNA Plasmid (m): sc-76253-SH, PRODH shRNA (h) Lentiviral Particles: sc-76252-V and PRODH shRNA (m) Lentiviral Particles: sc-76253-V.

Molecular Weight of PRODH: 68 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.

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.