

Pyrroline-5-carboxylate Reductase 2

Human, PYCR2

Expressed in *E.Coli*

Cat. No. CBCRY25

Lot. No. (See product label)

BACKGROUND

Pyrroline-5-carboxylate reductase (P5CR) is a universal housekeeping enzyme that catalyzes the reduction of Delta (1)-pyrroline-5-carboxylate (P5C) to proline using NAD(P)H as the cofactor. The enzymatic cycle between P5C and proline is very important for the regulation of amino acid metabolism, intracellular redox potential, and apoptosis.

MOLECULAR DESCRIPTION

Protein classification: Oxidoreductase

Structure Weight: 149791.08 Da

Polymer: 1

Molecule: Pyrroline-5-carboxylate reductase 2

Chains: A, B, C, D, E

Type: polypeptide (L)

Chain Length: 277 amino acids

CRYSTAL INFORMATION

PDB ID: [2GR9](#)

MMDB ID: [41570](#)

Source: E.Coli

Method: X-Ray Diffraction

Resolution: 3.1 Å

Ligand Chemical Component: Magnesium ion; Sulfate ion

CRYSTAL STRUCTURE



GENE INFORMATION

Gene Name: [PYCR2](#)

Synonyms: P5CR2; OTTHUMP00000035614; pyrroline 5-carboxylate reductase isoform; EC 1.5.1.2; P5C reductase 2; pyrroline-5-carboxylate reductase family, member 2; FLJ54750; RP4-559A3.4

UniProt ID: [Q96C36](#)

GeneID: [29920](#)

Chromosome Location: 1q42.12

Function: catalytic activity; binding; pyrroline-5-carboxylate reductase activity; Oxidoreductase activity

PRIMARY CITATION

Meng, Z., Lou, Z., Liu, Z., Li, M., Zhao, X., Bartlam, M., Rao, Z. (2006) Crystal structure of human pyrroline-5-carboxylate reductase J.Mol.Biol. 359: 1364-1377

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