

Recombinant Human Pyrroline-5-carboxylate Reductase 2

Cat. No. CRY20 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PYCR2 produced in E. coli is a single non-glycosylated polypeptide chain containing 277 amino acids and having a molecular mass of approximately 33 kDa.
Species	Human
Source	E. coli
Description	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. In enzymology, a pyrroline-2-carboxylate reductase (EC 1.5.1.1) is an enzyme that catalyzes the chemical reaction: L-proline + NAD(P)⁺ → 1-pyrroline-2-carboxylate + NAD(P)H + H⁺. The 3 substrates of this enzyme are L-proline, NAD⁺, and NADP⁺, whereas its 4 products are 1-pyrroline-2-carboxylate, NADH, NADPH, and H⁺. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-NH group of donors with NAD⁺ or NADP⁺ as acceptor. The systematic name of this enzyme class is L-proline:NAD(P)⁺ 2-oxidoreductase. This enzyme is also called Delta1-pyrroline-2-carboxylate reductase.
Physical Appearance	Sterile Liquid
Purity	>98% as determined by RP-HPLC and SDS-PAGE.

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Storage

Store at -80°C. Aliquot to avoid repeated freezing and thawing.

Reconstitution

Sample is ready to use. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION**Synonyms**

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

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