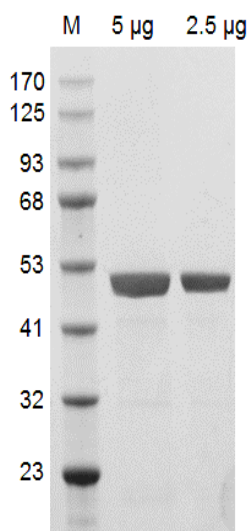


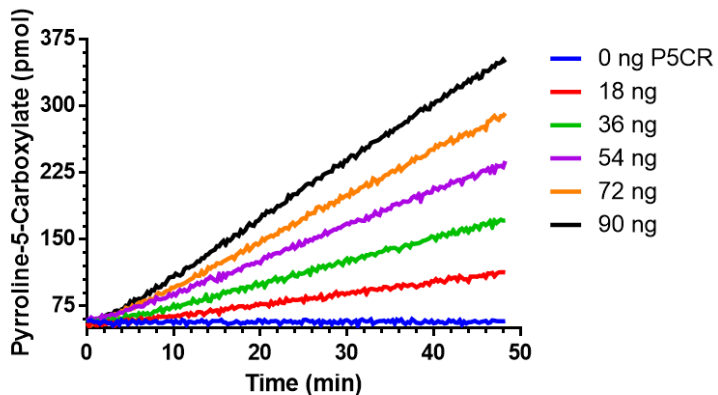
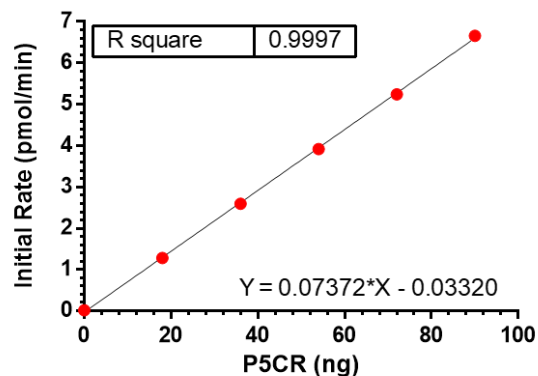
rev 04/21

Pyrroline-5-carboxylate reductase, *M. tuberculosis* Recombinant

CATALOG NO:	P1456-10 10 µg P1456-50 50 µg
ALTERNATE NAMES:	P5CR, PCA reductase, P5C reductase, proC
MOL. WT.	49.4 kDa with N-terminal TRX tag
SOURCE:	<i>E. coli</i>
PURITY:	≥90% SDS-PAGE
FORM:	Lyophilized
FORMULATION:	Proprietary Buffer
RECONSTITUTION:	Reconstitute the lyophilized protein with 30% Glycerol and 5 mM BME at a concentration of 0.5 mg/ml. Incubate the reconstituted protein at 25 °C for 15 minutes.
SPECIFIC ACTIVITY:	This enzyme has a specific activity of ≥ 7 mU/mg based on its conversion of Proline to Pyrroline-5-Carboxylate.
UNIT DEFINITION:	One unit is the amount of enzyme that will convert 1.0 µmole of Proline to Pyrroline-5-Carboxylate per minute at pH 9.5 and 37 °C.
STORAGE CONDITIONS:	Store at -20 °C. Aliquot and store the reconstituted enzyme at -20 °C and use within 2 months after reconstitution. Avoid repeated freeze-thaw cycles.
DESCRIPTION:	P5CR catalyzes the NADH-dependent conversion of Pyrroline-5-Carboxylate to Proline. It is important for regulating amino acid metabolism, intracellular redox potential, and apoptosis. Increased P5CR expression and activity have been observed in carcinomas and pulmonary tumors.
AMINO ACID SEQUENCE:	1 – 295



SDS-PAGE (4-20%) recombinant P5CR: Recombinant protein loaded under reducing conditions and stained with Coomassie Blue. Lane M- MW marker

(A)**(B)**

Figures: **(A)** Dose response kinetics of Pyrroline-5-Carboxylate Reductase (P5CR) with 20 mM Proline and 4 mM NAD⁺. The assay was performed using Biovision's PicoProbe™ Proline Assay Kit (Cat# K2020) in a flatbottom black opaque plate. **(B)** Initial rate of formation of Pyrroline-5-Carboxylate as a function of Pyrroline-5-Carboxylate Reductase concentration. The slope of this plot yields the Specific Activity of this particular lot of P5CR.

RELATED PRODUCTS:

- Lysine Assay Kit (K2005)
- Total D-Amino Acid Assay Kit (K445)
- Hydroxyproline Assay Kit (K226)
- L-Amino Acid Quantification Colorimetric/Fluorometric Kit (K639)

FOR RESEARCH USE ONLY! Not to be used on humans.