

# PYCR1, human recombinant

**CATALOG #:** 7368-50 50 µg

**ALTERNATE NAMES:** Pyrroline-5-carboxylate reductase 1, ARCL2B, P5C, P5CR, PIG45, PP222, PRO3

**SOURCE:** E. coli

**PURITY:** > 90% by SDS-PAGE

**FORM:** Liquid

**FORMULATION:** 0.5 mg/ml in 20 mM Tris-HCl buffer (pH 8.5) containing 10% glycerol.

**MOL. WEIGHT:** 35.5 kDa (339 aa, 1-319 aa + His Tag).

**STORAGE CONDITIONS:** Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

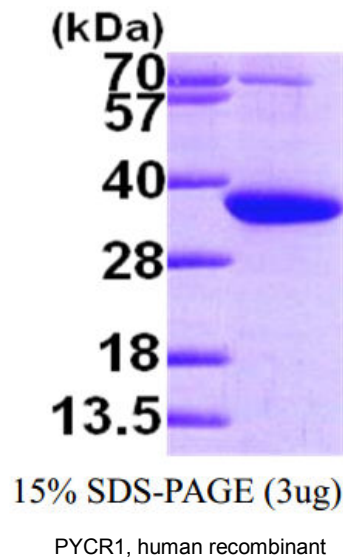
**DESCRIPTION:** PYCR1 is a universal housekeeping enzyme that catalyzes the NAD (P) H-dependent conversion of pyrroline-5-carboxylate to proline. This enzyme may also play a physiologic role in the generation of NADP (+) in some cell types. It forms a homopolymer and localizes to the mitochondrion. Defects in PYCR1 are the cause of cutis laxa autosomal recessive type 2B (ARCL2B). Recombinant human PYCR1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.

**AMINO ACID SEQUENCE:** MGSSHHHHHH SSGLVPRGSH MSVGFAGAGQ  
 LAFALAKGFT AAGVLAHKI MASSPDMDLA TVSALRKMGV KLTPHNKETV  
 QHSDVLFLAV KPHIIPFILD EIGADIEDRH IVVSCAAGVT ISSIEKKLSA FRPAPRVIRC  
 MTNTPVVVRE GATVYATGTH AQVEDGRLME QLLSSVGFACT EVEEDLIDAV  
 TGLSGSGPAY AFTALDALAD GGVKMGLPRR LAVRLGAQAL LGAAKMLLHS  
 EQHPGQLKDN VSSPGGATIH ALHVLESGGF RSLINAVEA SCIRTRELQS  
 MADQEQVSPA AIKKTILDKV KLDSPAGTAL SPSGHTKLLP RSLAPAGKD

**BIOLOGICAL ACTIVITY:** Specific activity is > 0.03 unit/mg. One unit will oxidize 1.0 µmole of L-proline to 1-pyrroline-5-carboxylate per minute in the presence of beta NAD at pH 10.0 at 25°C.

**ACTIVITY ASSAY:**

1. Prepare an assay buffer with the following concentrations: 200 mM Tris-HCl (pH 10.0) and 10 mM NAD, 20 mM L-proline, and load 150 µl into each well.
2. Add 50 µl of 1.25 µg and 2.5 µg recombinant PYCR1 protein to each well.
3. Record the increase in A340 nm for 5 minutes at 25°C.



**RELATED PRODUCTS:**

- NAD/NADH Quantitation Colorimetric Kit (Cat. No. K337-100)
- NADP/NADPH Quantitation Colorimetric Kit (Cat. No. K347-100)

**FOR RESEARCH USE ONLY! Not to be used in humans.**

