

Recombinant human PYCR1 protein

Catalog Number: ATGP0811

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-319aa

UniProt No.

P32322

NCBI Accession No.

NP_008838

Alternative Names

Pyrroline-5-carboxylate reductase 1, ARCL2B, P5C, P5CR, PIG45, PP222, PRO3

PRODUCT SPECIFICATION

Molecular Weight

35.5 kDa (339aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.5) containing 10% glycerol

Purity

> 90% by SDS-PAGE

Biological Activity

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

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

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

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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 SGLVPRGSH> MSVGFAGQ LAFALAKGFT AAGVLAHAI MASSPDMDLA TVSALRKMVG
KLTPHNKETV QHSDVLFLLAV KPHIIPFILD EIGADIEDRH IVVSCAAGVT ISSIEKKLSA FRPAPRVIRC MTNTPVVVRE
GATVYATGTH AQVEDGRLME QLLSSVGFCT EVEEDLIDAV TGLSGSGPAY AFTALDALAD GGVKMGLPRR LAVRLGAQAL
LGAAMLLHS EQHPGQLKDN VSSPGGATIH ALHVLESGLF RLLINAVEA SCIRTRELQS MADQEQVSPA AIKKTILDKV
KLDSPAGTAL SPSGHTKLLP RSLAPAGKD

General References

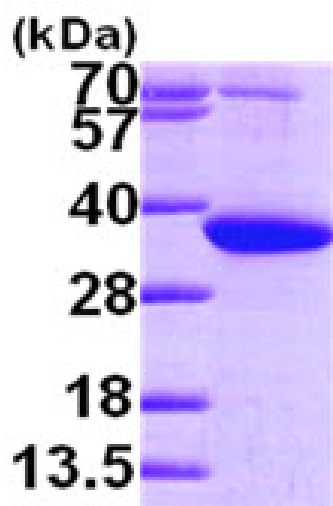
Kornak u., et al. (2009) *Nat Genet.* 41(9):1016-21.

Rao Z., et al (2006) *J Mol Biol.* 359(5):1364-77.

DATA

SDS-PAGE

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.



15% SDS-PAGE (3ug)