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PYCR1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9893b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P32322
Reactivity	Human
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24671
Calculated MW	33361
Antigen Region	291-319

Additional Information

Gene ID	5831
Other Names	Pyrroline-5-carboxylate reductase 1, mitochondrial, P5C reductase 1, P5CR 1, PYCR1
Target/Specificity	This PYCR1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 291-319 amino acids from the C-terminal region of human PYCR1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PYCR1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PYCR1 (HGNC:9721)
Function	Oxidoreductase that catalyzes the last step in proline biosynthesis, which corresponds to the reduction of pyrroline-5- carboxylate to L-proline using

NAD(P)H (PubMed:16730026, PubMed:19648921, PubMed:23024808, PubMed:28258219). At physiologic concentrations, has higher specific activity in the presence of NADH (PubMed:16730026, PubMed:23024808). Involved in the cellular response to oxidative stress (PubMed:16730026, PubMed:19648921).

Cellular Location Mitochondrion

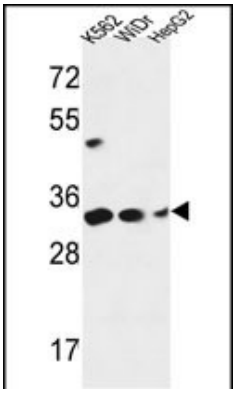
Background

This gene encodes an 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. The protein forms a homopolymer and localizes to the mitochondrion.

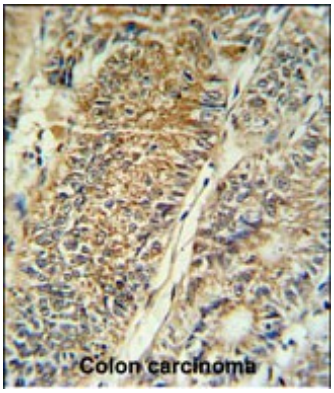
References

Reversade, B., et al. Nat. Genet. 41(9):1016-1021(2009)
Guernsey, D.L., et al. Am. J. Hum. Genet. 85(1):120-129(2009)
Meng, Z., et al. J. Mol. Biol. 359(5):1364-1377(2006)

Images

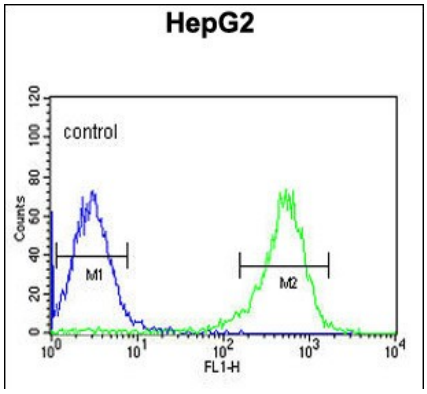


PYCR1 Antibody (C-term) (Cat. #AP9893b) western blot analysis in K562,WiDr,HepG2 cell line lysates (35ug/lane).This demonstrates the PYCR1 antibody detected the PYCR1 protein (arrow).



PYCR1 Antibody (C-term) (Cat. #AP9893b) IHC analysis in formalin fixed and paraffin embedded colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PYCR1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

PYCR1 Antibody (C-term) (Cat. #AP9893b) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Citations

- Pyrroline-5-Carboxylate Reductase 1 Accelerates the Migration and Invasion of Nonsmall Cell Lung Cancer In Vitro.
- Knockdown of PYCR1 inhibits cell proliferation and colony formation via cell cycle arrest and apoptosis in prostate cancer.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.