Product Name: **CYB5R3 Rabbit Polyclonal Antibody**
Catalog #: **APRab09575**
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Rat,Mouse
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:20000-1:40000
Molecular Weight	34kDa

Antigen Information

Gene Name	CYB5R3
Alternative Names	CYB5R3; DIA1; NADH-cytochrome b5 reductase 3; B5R; Cytochrome b5 reductase; Diaphorase-1
Gene ID	1727.0
SwissProt ID	P00387
Immunogen	The antiserum was produced against synthesized peptide derived from human CYB5R3. AA range:137-186

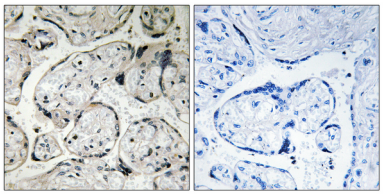
Background

This gene encodes cytochrome b5 reductase, which includes a membrane-bound form in somatic cells (anchored in the endoplasmic reticulum, mitochondrial and other membranes) and a soluble form in erythrocytes. The membrane-bound form exists mainly on the cytoplasmic side of the endoplasmic reticulum and functions in desaturation and elongation of fatty acids, in cholesterol biosynthesis, and in drug metabolism. The erythrocyte form is located in a soluble fraction of circulating erythrocytes and is involved in methemoglobin reduction. The membrane-bound form has both membrane-binding and catalytic domains, while the soluble form has only the catalytic domain. Alternate splicing results in multiple transcript variants. Mutations in this gene cause methemoglobinemias. [provided by RefSeq, Jan 2010],catalytic activity:NADH + 2 ferricytochrome b5 = NAD(+) + H(+) + 2 ferrocytochrome b5.,cofactor:FAD.,disease:Defects in CYB5R3 are the cause of hereditary methemoglobinemia (HM) [MIM:250800]. There are three forms of this disease: type 1 (HM1) in which the enzyme is only deficient in erythrocytes with a mild cyanosis; type 2 (HM2), in which the enzyme is completely deficient; type 3 (HM3) where the deficiency is seen in all blood cells. Type 2 is a severe form accompanied with mental retardation and neurological impairment.,function:Desaturation and elongation of fatty acids, cholesterol biosynthesis, drug metabolism, and, in erythrocyte, methemoglobin reduction.,polymorphism:Ser-117 seems to only be found in persons of African origin. The allele frequency is 0.23 in African Americans. It was not found in Caucasians, Asians, Indo-Aryans, or Arabs. There seems to be no effect on the enzyme activity.,similarity:Belongs to the flavoprotein pyridine nucleotide cytochrome reductase family.,similarity:Contains 1 FAD-binding FR-type domain.,subcellular location:Produces the soluble form found in erythrocytes.,subunit:Component of a complex composed of cytochrome b5, NADH-cytochrome b5 reductase (CYB5R3) and MOSC2.,tissue specificity:Isoform 2 (soluble form) is expressed at late stages of erythroid maturation.,

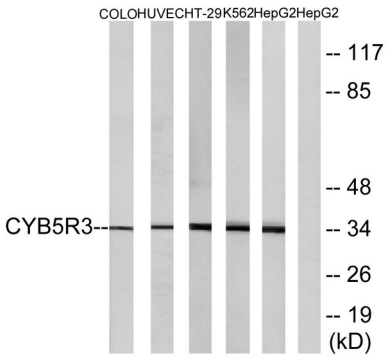
Research Area

Amino sugar and nucleotide sugar metabolism;

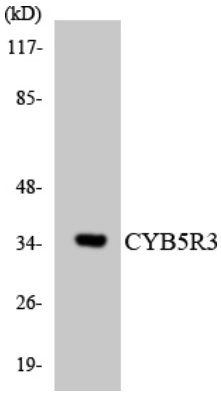
Image Data



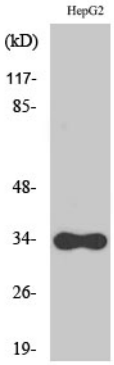
Immunohistochemistry analysis of paraffin-embedded human placenta tissue, using CYB5R3 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from HepG2, COLO, HUVEC, HT-29, and K562 cells, using CYB5R3 Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from K562 cells using CYB5R3 antibody.



Western Blot analysis of various cells using CYB5R3 Polyclonal Antibody