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CYB5R3 Rabbit mAb

Catalog # AP75309

Product Information

Application	WB, IHC-P
Primary Accession	P00387
Reactivity	Rat, Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	34235

Additional Information

Gene ID	1727
Other Names	CYB5R3
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

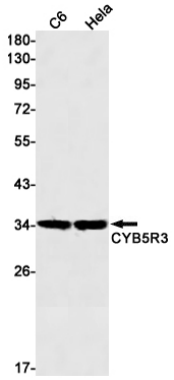
Protein Information

Name	CYB5R3 (HGNC:2873)
Synonyms	DIA1
Function	Catalyzes the reduction of two molecules of cytochrome b5 using NADH as the electron donor.
Cellular Location	[Isoform 1]: Endoplasmic reticulum membrane; Lipid-anchor {ECO:0000250|UniProtKB:P20070}; Cytoplasmic side {ECO:0000250|UniProtKB:P20070}. Mitochondrion outer membrane; Lipid-anchor {ECO:0000250|UniProtKB:P20070}; Cytoplasmic side {ECO:0000250|UniProtKB:P20070}
Tissue Location	[Isoform 2]: Expressed at late stages of erythroid maturation.

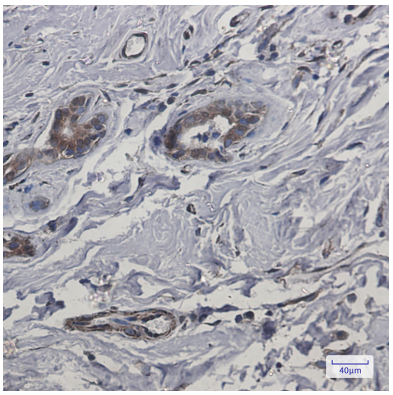
Background

CYB5R3 is a 301 amino acid protein encoded by the human gene CYB5R3. CYB5R3 belongs to the flavoprotein pyridine nucleotide cytochrome reductase family and has two naturally occuring isoforms. Isoform 1 is anchored to the cytoplasmic side of the endoplasmic reticulum membrane and mitochondrion outer membrane, while isoform 2 is the soluble form found in erythrocytes. CYB5R3 is involved in the desaturation and elongation of fatty acids, cholesterol biosynthesis, drug metabolism and, in erythrocytes, methemoglobin reduction. A serine residue at position 117 seems to only be found in persons of African origin. The allele frequency is 0.23 in African Americans. It is not found in Caucasians, Asians, Indo-Aryans or Arabs. This difference seems to have no effect on the enzyme activity. Defects in CYB5R3 are the cause of hereditary methemoglobinemia (HM). 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; and type 3 (HM3), where the deficiency is seen in all blood cells. Type 2 is a severe form accompanied by mental retardation and neurological impairment.

Images



Western blot analysis of CYB5R3 in C6, Hela lysates using CYB5R3 antibody.



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using CYB5R3 antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

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