10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CYP7A1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21523a

Product Information

Application	WB, E
Primary Accession	P22680
Reactivity	Human
Predicted	Bovine, Canine
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52160
Calculated MW	57661

Additional Information

Gene ID	1581
Other Names	Cholesterol 7-alpha-monooxygenase, CYPVII, Cholesterol 7-alpha-hydroxylase, Cytochrome P450 7A1, CYP7A1, CYP7
Target/Specificity	This CYP7A1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 27-58 amino acids from the N-terminal region of human CYP7A1.
Dilution	WB~~1:1000-1:2000 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	CYP7A1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CYP7A1 {ECO:0000303|PubMed:12077124, ECO:0000312|HGNC:HGNC:2651}
Function	A cytochrome P450 monooxygenase involved in the metabolism of endogenous cholesterol and its oxygenated derivatives (oxysterols) (PubMed:11013305, PubMed:12077124, PubMed:19965590,

PubMed:21813643, PubMed:2384150). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR; NADPH-ferrihemoprotein reductase) (PubMed:11013305, PubMed:12077124, PubMed:19965590, PubMed:21813643, PubMed:2384150). Functions as a critical regulatory enzyme of bile acid biosynthesis and cholesterol homeostasis. Catalyzes the hydroxylation of carbon hydrogen bond at 7-alpha position of cholesterol, a rate-limiting step in cholesterol catabolism and bile acid biosynthesis (PubMed:12077124, PubMed:19965590, PubMed:2384150). 7-alpha hydroxylates several oxysterols, including 4beta-hydroxycholesterol and 24-hydroxycholesterol (PubMed:11013305, PubMed:12077124). Catalyzes the oxidation of the 7,8 double bond of 7-dehydrocholesterol and lathosterol with direct and predominant formation of the 7-keto derivatives (PubMed:21813643).

Cellular Location Endoplasmic reticulum membrane; Single-pass membrane protein. Microsome membrane; Single-pass membrane protein

Tissue Location Detected in liver..

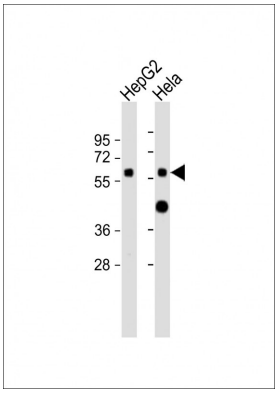
Background

Catalyzes a rate-limiting step in cholesterol catabolism and bile acid biosynthesis by introducing a hydrophilic moiety at position 7 of cholesterol. Important for cholesterol homeostasis.

References

Nishimoto M.,et al.Biochim. Biophys. Acta 1172:147-150(1993).
Noshiro M.,et al.FEBS Lett. 268:137-140(1990).
Karam W.G.,et al.Biochem. Biophys. Res. Commun. 185:588-595(1992).
Wang D.P.,et al.Genomics 20:320-323(1994).
Molowa D.T.,et al.Biochemistry 31:2539-2544(1992).

Images



All lanes : Anti-CYP7A1 Antibody (N-term) at 1:2000 dilution Lane 1: HepG2 whole cell lysates Lane 2: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 58 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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