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CYP7A1 Blocking Peptide (N-term)

Synthetic peptide
Catalog # BP21523a

Specification

CYP7A1 Blocking Peptide (N-term) - Product Information

Primary Accession P22680

CYP7A1 Blocking Peptide (N-term) - Additional Information

Gene ID 1581

Other Names
Cholesterol 7-alpha-monooxygenase, CYPVII, Cholesterol 7-alpha-hydroxylase, Cytochrome P450 7A1, CYP7A1, CYP7

Target/Specificity
The synthetic peptide sequence is selected from aa 27-38 of HUMAN CYP7A1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CYP7A1 Blocking Peptide (N-term) - 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:<a

href="http://www.uniprot.org/citations/2384150" target="_blank">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..

CYP7A1 Blocking Peptide (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CYP7A1 Blocking Peptide (N-term) - Images

CYP7A1 Blocking Peptide (N-term) - 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.

CYP7A1 Blocking Peptide (N-term) - References

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Molowa D.T.,et al.Biochemistry 31:2539-2544(1992).