

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

[2384150](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/12077124), PubMed: [19965590](http://www.uniprot.org/citations/19965590), PubMed: [2384150](http://www.uniprot.org/citations/2384150)). 7-alpha hydroxylates several oxysterols, including 4beta-hydroxycholesterol and 24- hydroxycholesterol (PubMed: [11013305](http://www.uniprot.org/citations/11013305), PubMed: [12077124](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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

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).