

## Product Information

### **MemDX™ Membrane Protein Human CYP7A1 (Cytochrome P450 family 7 subfamily A member 1) Full Length**

Cat. No.: **MPC4719K**

This product is for research use only and is not intended for diagnostic use.

This product is a made-to-order Human CYP7A1 membrane protein expressed in HEK293. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

#### Product Specifications

##### Host Species

Human

##### Target Protein

CYP7A1

##### Protein Length

Full length

##### Protein Class

Oxidoreductase

##### TMD

1

##### Sequence

MMTTSLIWGIAIAACCCLWLILGIRRRQTGEPPLENGLIPYLGICALQFGA  
NPLEFLRANQRKHGHVFTCKLMGKYVHFITNPLSYHKVLCHGKYFDWKKF  
HFATSAKAFGHRSIDPMDGNTTENINDTFIKTLQGHALNSL TESMMENLQ  
RIMRPPVSSNSKTAAWVTEGMYSFCYRVMFEAGYLTIFGRDLTRRDTQKA  
HILNNLDNFKQFDKVFALVAGLPIHMFRTAHNAREKLAESLRHENLQKR  
ESISELISLRMFLNDTLSTFDDLEKAKTHLVVLWASQANTIPATFWSLFQ  
MIRNPEAMKAATEEVKRTLLENAGQKVSLEGNPICLSQAELNDLPVLSII  
KESLRLSSASLNIRTAKEDFTLHLEDGSYNIRKDDIIALYPQLMHLDP  
EIPYDPLTFKYDRYLDENGKTKTTFYCNGCLKLYYYMPFGSGATICPGRLFA  
IHEIKQFLILMSYFELELIEGQAKCPPLDQSRAGLGILPPLNDIEFKYK  
FKHL

#### Product Description

##### Expression Systems

HEK293

##### Tag

Based on specific requirements

**Protein Format**

Detergent or based on specific requirements (Detergent, Liposome, Nanodisc, Polymer, VLP)

**Form**

Liquid

**Storage**

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -72°C or lower. Avoid freeze/thaw cycles.

**Target****Target Protein**

CYP7A1

**Full Name**

Cytochrome P450 family 7 subfamily A member 1

**Introduction**

This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This endoplasmic reticulum membrane protein catalyzes the first reaction in the cholesterol catabolic pathway in the liver, which converts cholesterol to bile acids. This reaction is the rate limiting step and the major site of regulation of bile acid synthesis, which is the primary mechanism for the removal of cholesterol from the body. Polymorphisms in the promoter of this gene are associated with defects in bile acid synthesis.

**Alternative Names**

CYP7A1; CP7A; CYP7; CYPVII; cytochrome P450 7A1; 24-hydroxycholesterol 7-alpha-hydroxylase; cholesterol 7-alpha-hydroxylase; cholesterol 7-alpha-monooxygenase; cholesterol 7alpha-hydroxylase; cytochrome P450, family 7, subfamily A, polypeptide 1; cytochrome P450, subfamily VIIA polypeptide 1; Cytochrome P450 family 7 subfamily A member 1

**Gene ID**

[1581](#)

**UniProt ID**

[P22680](#)