

# CYP7B1 Polyclonal Antibody

Catalog # AP69424

## Product Information

Application	WB, IHC-P
Primary Accession	<a href="#">O75881</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58256

## Additional Information

Gene ID	9420
Other Names	CYP7B1; 25-hydroxycholesterol 7-alpha-hydroxylase; Cytochrome P450 7B1; Oxysterol 7-alpha-hydroxylase
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

## Protein Information

Name	CYP7B1 {ECO:0000303   PubMed:24491228, ECO:0000312   HGNC:HGNC:2652}
Function	<p>A cytochrome P450 monooxygenase involved in the metabolism of endogenous oxysterols and steroid hormones, including neurosteroids (PubMed:<a href="#">10588945</a>, PubMed:<a href="#">24491228</a>). 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:<a href="#">10588945</a>, PubMed:<a href="#">24491228</a>). Catalyzes the hydroxylation of carbon hydrogen bonds of steroids with a preference for 7-alpha position (PubMed:<a href="#">10588945</a>, PubMed:<a href="#">24491228</a>). Usually metabolizes steroids carrying a hydroxy group at position 3, functioning as a 3- hydroxy steroid 7-alpha hydroxylase (PubMed:<a href="#">24491228</a>). Hydroxylates oxysterols, including 25-hydroxycholesterol and (25R)-cholest-5-ene- 3beta,26-diol toward 7-alpha hydroxy derivatives, which may be transported to the liver and converted to bile acids (PubMed:<a href="#">10588945</a>, PubMed:<a href="#">9802883</a>). Via its product 7-alpha,25-dihydroxycholesterol, a ligand for the chemotactic G protein-coupled receptor GPR183/EBI2, regulates B cell migration in germinal</p>

centers of lymphoid organs, thus guiding efficient maturation of plasma B cells and overall antigen- specific humoral immune response (By similarity). 7-alpha hydroxylates neurosteroids, including 3beta-hydroxyandrost-5-en-17-one (dehydroepiandrosterone) and pregnenolone, both involved in hippocampus-associated memory and learning (PubMed:[24491228](#)). Metabolizes androstanooids toward 6- or 7-alpha hydroxy derivatives (PubMed:[24491228](#)).

**Cellular Location**

Endoplasmic reticulum membrane; Multi-pass membrane protein. Microsome membrane; Multi- pass membrane protein

**Tissue Location**

Widely expressed. Expressed in brain, testis, ovary, prostate, liver, colon, kidney, small intestine, thymus and spleen.

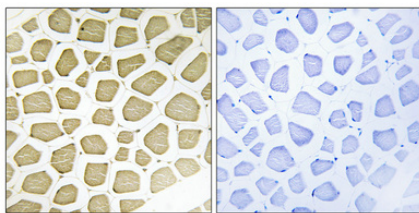
## Background

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Oxysterol 7alpha-hydroxylase that mediates formation of 7-alpha,25-dihydroxycholesterol (7-alpha,25-OHC) from 25- hydroxycholesterol (PubMed:[10588945](#)). Plays a key role in cell positioning and movement in lymphoid tissues: 7-alpha,25- dihydroxycholesterol (7-alpha,25-OHC) acts as a ligand for the G protein-coupled receptor GPR183/EBI2, a chemotactic receptor for a number of lymphoid cells (By similarity).

## Images

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Immunohistochemical analysis of paraffin-embedded Human skeletal muscle. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.

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