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CYP7B1 Polyclonal Antibody

Catalog # AP69424

Product Information

Application	WB, IHC-P
Primary Accession	O75881
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℃

Protein Information

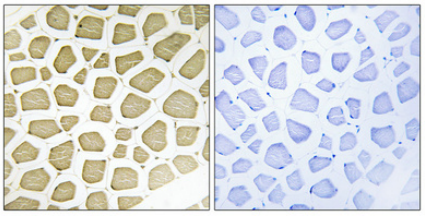
Name	CYP7B1 {ECO:0000303|PubMed:24491228, ECO:0000312|HGNC:HGNC:2652}
Function	A cytochrome P450 monooxygenase involved in the metabolism of endogenous oxysterols and steroid hormones, including neurosteroids (PubMed:10588945, PubMed:24491228). Mechanistically, uses molecular oxygen inserting one oxygen 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:10588945, PubMed:24491228). Catalyzes the hydroxylation of carbon hydrogen bonds of steroids with a preference for 7-alpha position (PubMed:10588945, PubMed:24491228). Usually metabolizes steroids carrying a hydroxy group at position 3, functioning as a 3- hydroxy steroid 7-alpha hydroxylase (PubMed:24491228). 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:10588945, PubMed:9802883). Via its product 7-alpha,25-dihydroxycholesterol, a ligand for the chemotactic G protein-coupled receptor GPR183/EBI2, regulates B cell migration in germinal

	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 androstanoids 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

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



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. Negetive contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.