

CYP27A1 Antibody
Rabbit mAb
Catalog # AP91984

Specification

CYP27A1 Antibody - Product Information

Application	WB, IHC, FC, ICC
Primary Accession	Q02318
Reactivity	Rat
Clonality	Monoclonal
Other Names	
CP27; CTX; CYP; CYP27; CYP27A1;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	60235 Da

CYP27A1 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CYP27A1
Description	Catalyzes the first step in the oxidation of the side chain of sterol intermediates; the 27-hydroxylation of 5-beta-cholestane-3-alpha,7-alpha,12-alpha-triol. Has also a vitamin D3-25-hydroxylase activity.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

CYP27A1 Antibody - Protein Information

Name CYP27A1 {ECO:0000303|PubMed:21411718, ECO:0000312|HGNC:HGNC:2605}

Function

Cytochrome P450 monooxygenase that catalyzes regio- and stereospecific hydroxylation of cholesterol and its derivatives. Hydroxylates (with R stereochemistry) the terminal methyl group of cholesterol side-chain in a three step reaction to yield at first a C26 alcohol, then a C26 aldehyde and finally a C26 acid (PubMed: [12077124](http://www.uniprot.org/citations/12077124) target="_blank">12077124, PubMed: [21411718](http://www.uniprot.org/citations/21411718) target="_blank">21411718, PubMed: [28190002](http://www.uniprot.org/citations/28190002) target="_blank">28190002, PubMed: [9660774](http://www.uniprot.org/citations/9660774) target="_blank">9660774). Regulates cholesterol homeostasis by catalyzing the conversion of excess cholesterol to bile acids via both the 'neutral' (classic) and the 'acid' (alternative) pathways (PubMed: [11412116](http://www.uniprot.org/citations/11412116) target="_blank">11412116, PubMed: [1708392](http://www.uniprot.org/citations/1708392) target="_blank">1708392).

target="_blank">1708392, PubMed:2019602, PubMed:7915755, PubMed:9186905, PubMed:9660774, PubMed:9790667). May also regulate cholesterol homeostasis via generation of active oxysterols, which act as ligands for NR1H2 and NR1H3 nuclear receptors, modulating the transcription of genes involved in lipid metabolism (PubMed:12077124, PubMed:9660774). Plays a role in cholestanol metabolism in the cerebellum. Similarly to cholesterol, hydroxylates cholestanol and may facilitate sterol diffusion through the blood-brain barrier to the systemic circulation for further degradation (PubMed:28190002). Also hydroxylates retinal 7- ketocholesterol, a noxious oxysterol with pro-inflammatory and pro- apoptotic effects, and may play a role in its elimination from the retinal pigment epithelium (PubMed:21411718). May play a redundant role in vitamin D biosynthesis. Catalyzes 25-hydroxylation of vitamin D3 that is required for its conversion to a functionally active form (PubMed:15465040).

Cellular Location

Mitochondrion inner membrane {ECO:0000250|UniProtKB:P17178}; Peripheral membrane protein {ECO:0000250|UniProtKB:P17178}. Note=Post-translationally targeted to mitochondria. All three of the receptor proteins in the TOM complex, TOMM70, TOMM20 and TOMM22 are required for the translocation across the mitochondrial outer membrane. After translocation into the matrix, associates with the inner membrane as a membrane extrinsic protein {ECO:0000250|UniProtKB:P17178}

Tissue Location

Expressed in the neural retina and underlying retinal pigment epithelium (at protein level) (PubMed:21411718) Expressed in the gray and white matter of cerebellum (at protein level) (PubMed:28190002).

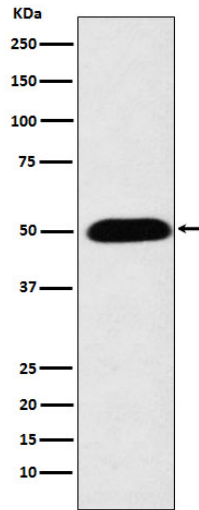
CYP27A1 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CYP27A1 Antibody - Images





Western blot analysis of CYP27A1 expression in HepG2 cell lysate.