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CYP26B1 Polyclonal Antibody

Catalog # AP74005

Product Information

Application	WB
Primary Accession	Q9NR63
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57513

Additional Information

Gene ID	56603
Other Names	CYP26B1 CYP26A2 P450RAI2
Dilution	WB~~WB 1:500-2000, ELISA 1:10000-20000
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

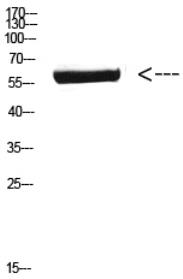
Name	CYP26B1
Synonyms	CYP26A2, P450RAI2
Function	A cytochrome P450 monooxygenase involved in the metabolism of retinoates (RAs), the active metabolites of vitamin A, and critical signaling molecules in animals (PubMed:10823918, PubMed:22020119). RAs exist as at least four different isomers: all-trans-RA (atRA), 9-cis- RA, 13-cis-RA, and 9,13-dicis-RA, where atRA is considered to be the biologically active isomer, although 9-cis-RA and 13-cis-RA also have activity (Probable). Catalyzes the hydroxylation of atRA primarily at C-4 and C-18, thereby contributing to the regulation of atRA homeostasis and signaling (PubMed:10823918). Hydroxylation of atRA limits its biological activity and initiates a degradative process leading to its eventual elimination (PubMed:10823918, PubMed:22020119). Involved in the convertion of atRA to all-trans-4-oxo-RA. Can oxidize all-trans-13,14-dihydroretinoate (DRA) to metabolites which could include all-trans-4-oxo-DRA, all-trans-4-hydroxy-DRA, all-trans-5,8- epoxy-DRA, and all-trans-18-hydroxy-DRA (By similarity). Shows preference for the following substrates: atRA > 9-cis-RA > 13-cis-RA (PubMed:10823918, PubMed:22020119). Plays a central role in germ cell development: acts by degrading RAs in the developing testis, preventing STRA8 expression, thereby

	leading to delay of meiosis. Required for the maintenance of the undifferentiated state of male germ cells during embryonic development in Sertoli cells, inducing arrest in G0 phase of the cell cycle and preventing meiotic entry. Plays a role in skeletal development, both at the level of patterning and in the ossification of bone and the establishment of some synovial joints (PubMed:22019272). Essential for postnatal survival (By similarity).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:O43174}; Peripheral membrane protein {ECO:0000250|UniProtKB:O43174}. Microsome membrane {ECO:0000250|UniProtKB:O43174}; Peripheral membrane protein {ECO:0000250|UniProtKB:O43174}
Tissue Location	Highly expressed in brain, particularly in the cerebellum and pons.

Background

Involved in the metabolism of retinoic acid (RA), rendering this classical morphogen inactive through oxidation. Involved in the specific inactivation of all-trans-retinoic acid (all-trans-RA), with a preference for the following substrates: all-trans-RA > 9-cis-RA > 13-cis-RA. Generates several hydroxylated forms of RA, including 4-OH-RA, 4-oxo-RA, and 18-OH- RA. Essential for postnatal survival. Plays a central role in germ cell development: acts by degrading RA in the developing testis, preventing STRA8 expression, thereby leading to delay of meiosis. Required for the maintenance of the undifferentiated state of male germ cells during embryonic development in Sertoli cells, inducing arrest in G0 phase of the cell cycle and preventing meiotic entry. Plays a role in skeletal development, both at the level of patterning and in the ossification of bone and the establishment of some synovial joints.

Images



Western Blot analysis of mouse-brain cells using Antibody diluted at 800. Secondary antibody was diluted at 1:20000