10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CYP2R1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7894C

Specification

CYP2R1 Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q6VVX0
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**57359**
Antigen Region	**152-180**

CYP2R1 Antibody (Center) - Additional Information

Gene ID 120227

Other Names
Vitamin D 25-hydroxylase, Cytochrome P450 2R1, CYP2R1

Target/Specificity
This CYP2R1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 152-180 amino acids from the Central region of human CYP2R1.

Dilution
WB~~1:1000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
CYP2R1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

CYP2R1 Antibody (Center) - Protein Information

Name CYP2R1

Function A cytochrome P450 monooxygenase involved in activation of vitamin D precursors. Catalyzes hydroxylation at C-25 of both forms of vitamin D, vitamin D(2) and D(3) (calciol)

(PubMed:12867411, PubMed:15465040, PubMed:18511070). Can metabolize vitamin D analogs/prodrugs 1alpha-hydroxyvitamin D(2) (doxercalciferol) and 1alpha-hydroxyvitamin D(3) (alfacalcidol) forming 25-hydroxy derivatives (PubMed:15465040, PubMed:18511070). 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:12867411, PubMed:15465040, PubMed:18511070).

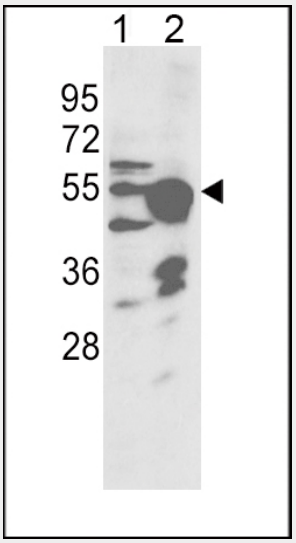
Cellular Location
Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein

CYP2R1 Antibody (Center) - Protocols

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

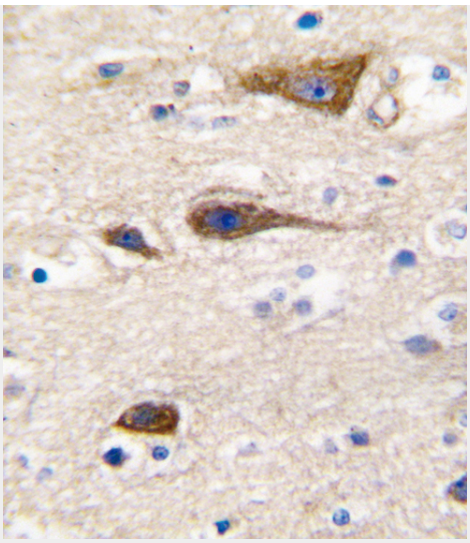
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CYP2R1 Antibody (Center) - Images



Western blot analysis of CYP2R1 Antibody (Center) (Cat.#AP7894c) in NCI-H460 cell line(lane 1) and mouse liver tissue(lane 2) lysates (35ug/lane). CYP2R1 (arrow) was detected using the purified Pab.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Formalin-fixed and paraffin-embedded human brain tissue reacted with CYP2R1 antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

CYP2R1 Antibody (Center) - Background

CYP2R1 is 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 enzyme is a microsomal vitamin D hydroxylase that converts vitamin D into the active ligand for the vitamin D receptor. A mutation in CYP2R1 gene has been associated with selective 25-hydroxyvitamin D deficiency.

CYP2R1 Antibody (Center) - References

Ramos-Lopez,E., Diabetes Obes Metab 10 (8), 683-685 (2008)
Strushkevich,N., J. Mol. Biol. 380 (1), 95-106 (2008)
Ramos-Lopez,E., Diabetes Metab. Res. Rev. 23 (8), 631-636 (2007)
Nelson,D.R., Pharmacogenetics 14 (1), 1-18 (2004)

CYP2R1 Antibody (Center) - Citations

- Role of the Drug-Metabolizing Enzyme CYP during Mouse Liver Development.