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

CYP2R1 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP7894c

Specification

CYP2R1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q6VVX0

CYP2R1 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 120227

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

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7894c was selected from the Center region of human CYP2R1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CYP2R1 Antibody (Center) Blocking Peptide - 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:<a

href="http://www.uniprot.org/citations/12867411" target="_blank">12867411, PubMed:15465040, PubMed:18511070).

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

CYP2R1 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

CYP2R1 Antibody (Center) Blocking Peptide - Images

CYP2R1 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - 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)