

CYP2R1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP7894c**Specification**

CYP2R1 Antibody (Center) Blocking Peptide - Product InformationPrimary 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](/products/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) (calcitriol) (PubMed: [12867411](http://www.uniprot.org/citations/12867411), PubMed: [15465040](http://www.uniprot.org/citations/15465040), PubMed: [18511070](http://www.uniprot.org/citations/18511070)). Can metabolize vitamin D analogs/prodrugs 1alpha-hydroxyvitamin D(2) (doxercalciferol) and 1alpha-hydroxyvitamin D(3) (alfacalcidol) forming 25-hydroxy derivatives (PubMed: [15465040](http://www.uniprot.org/citations/15465040), PubMed: [18511070](http://www.uniprot.org/citations/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: [18511070](#)).

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)