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

CYP2D6 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP7882c

Specification

CYP2D6 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P10635

CYP2D6 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 1565

Other Names
Cytochrome P450 2D6, CYPIID6, Cytochrome P450-DB1, Debrisoquine 4-hydroxylase, CYP2D6, CYP2DL1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7882c was selected from the Center region of human CYP2D6. 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.

CYP2D6 Antibody (Center) Blocking Peptide - Protein Information

Name CYP2D6 {ECO:0000303|PubMed:21289075, ECO:0000312|HGNC:HGNC:2625}

Function
A cytochrome P450 monooxygenase involved in the metabolism of fatty acids, steroids and retinoids (PubMed:18698000, PubMed:19965576, PubMed:20972997, PubMed:21289075, PubMed:21576599). 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 (NADPH--hemoprotein reductase) (PubMed:18698000, PubMed:19965576, PubMed:<a

href="http://www.uniprot.org/citations/20972997" target="_blank">20972997, PubMed:21289075, PubMed:21576599). Catalyzes the epoxidation of double bonds of polyunsaturated fatty acids (PUFA) (PubMed:19965576, PubMed:20972997). Metabolizes endocannabinoid arachidonoylethanolamide (anandamide) to 20-hydroxyeicosatetraenoic acid ethanolamide (20-HETE-EA) and 8,9-, 11,12-, and 14,15-epoxyeicosatrienoic acid ethanolamides (EpETrE-EAs), potentially modulating endocannabinoid system signaling (PubMed:18698000, PubMed:21289075). Catalyzes the hydroxylation of carbon-hydrogen bonds. Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis (PubMed:21576599). Catalyzes the oxidative transformations of all-trans retinol to all-trans retinal, a precursor for the active form all-trans-retinoic acid (PubMed:10681376). Also involved in the oxidative metabolism of drugs such as antiarrhythmics, adrenoceptor antagonists, and tricyclic antidepressants.

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

CYP2D6 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

CYP2D6 Antibody (Center) Blocking Peptide - Images

CYP2D6 Antibody (Center) Blocking Peptide - Background

CYP2D6 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 protein localizes to the endoplasmic reticulum and is known to metabolize as many as 20% of commonly prescribed drugs. Its substrates include debrisoquine, an adrenergic-blocking drug; sparteine and propafenone, both anti-arrythmic drugs; and amitryptiline, an anti-depressant.

CYP2D6 Antibody (Center) Blocking Peptide - References

de Leon,J., CNS Spectr 14 (1), 19-34 (2009)Nelson,D.R., Pharmacogenetics 14 (1), 1-18 (2004)