

Store at
-20C
#73867**CYP2D6 (D5A6X) Rabbit mAb**

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 50	Source/Isotype: Rabbit IgG	UniProt ID: #P10635	Entrez-Gene Id: 1565
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CYP2D6 (D5A6X) Rabbit mAb recognizes endogenous levels of total CYP2D6 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val408 of human CYP2D6 protein.

Background

Cytochrome P450 2D6 (CYP2D6) is a member of the cytochrome P450 superfamily of enzymes. CYP2D6 is located in the endoplasmic reticulum where it oxidizes substrates such as drugs and environmental chemicals (1,2). CYP2D6 metabolizes more than 25% of current commonly used drugs including antidepressants, antipsychotics, analgesics, beta-adrenergic blocking agents, antiarrhythmics, and antiemetics. The *CYP2D6* gene is highly polymorphic in humans, resulting in phenotypes that vary from poor metabolizer to super metabolizer. A patient's CYP2D6 genotype was shown to be a good predictor of drug response and side effects and is thus used to guide treatments (3-5). Although abundantly expressed in liver, CYP2D6 is also expressed in other organs including brain. In brain, CYP2D6 and other CYP family members are expressed in a cell-specific, region-specific manner (6-8). CYP2D6 functions as a neuroprotective enzyme that increases with age and is induced by nicotine and alcohol (9,10).

Background References

- Kimura, S. et al. (1989) *Am J Hum Genet* 45, 889-904.
- Rowland, P. et al. (2006) *J Biol Chem* 281, 7614-22.
- Ellingrod, V.L. et al. (2002) *Psychiatr Genet* 12, 55-8.
- Nussbaum, L.A. et al. (2014) *Rom J Morphol Embryol* 55, 877-84.
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- Miksys, S. et al. (2002) *J Neurochem* 82, 1376-87.
- Howard, L.A. et al. (2003) *Br J Pharmacol* 138, 1376-86.
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- Mann, A. et al. (2012) *Neurobiol Aging* 33, 2160-71.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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