

# CYP2D6 (N-20): sc-23690

## BACKGROUND

The P450II family comprises at least five subfamilies, designated A through E by the system of nomenclature recommended by an international committee. The P450IID subfamily comprises at least two genes in the rat, one of which is highly specific for debrisoquine 4-hydroxylase activity. An association of this gene with lung cancer has been found. Enhanced CYP2D6 activity has been related to malignancies of the bladder, liver, pharynx and stomach, and especially to cigarette-smoking-induced lung cancer. The data suggests that enhanced CYP2D6-mediated metabolism of one or more dietary and other environmental agents, to form a reactive intermediate, plays a role in cancer initiation and/or promotion in various tissues. CYP2D6 polymorphism, which is responsible for the variation in metabolism of debrisoquine 4-hydroxylase, is important in the metabolism of more than 30 drugs and environmental chemicals, including as much as 20% of all commonly prescribed drugs. The gene which encodes CYP2D6 maps to human chromosome 22q13.2.

## REFERENCES

1. Nebert, D.W., et al. 1987. The P450 gene superfamily: recommended nomenclature. *DNA* 6: 1-11.
2. Roots, I., et al. 1988. Debrisoquine hydroxylation phenotype, acetylation phenotype, and ABO blood groups as genetic host factors of lung cancer risk. *Klin. Wochenschr.* 66: 87-97.
3. Law, M.R., et al. 1989. Debrisoquine metabolism and genetic predisposition to lung cancer. *Br. J. Cancer* 59: 686-687.
4. Gough, A.C., et al. 1993. Localization of the CYP2D gene locus to human chromosome 22q13.1 by polymerase chain reaction, *in situ* hybridization, and linkage analysis. *Genomics* 15: 430-432.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 124030. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: CYP2D6 (human) mapping to 22q13.2.

## SOURCE

CYP2D6 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CYP2D6 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23690 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

CYP2D6 (N-20) is recommended for detection of CYP2D6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CYP2D6 (N-20) is also recommended for detection of CYP2D6 in additional species, including equine and canine.

Suitable for use as control antibody for CYP2D6 siRNA (h): sc-41489, CYP2D6 shRNA Plasmid (h): sc-41489-SH and CYP2D6 shRNA (h) Lentiviral Particles: sc-41489-V.

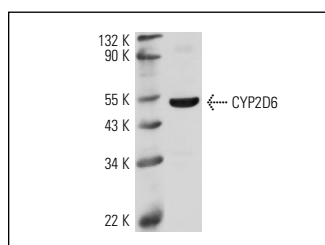
Molecular Weight of CYP2D6: 50 kDa.

Positive Controls: A549 cell lysate: sc-2413.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



CYP2D6 (N-20): sc-23690. Western blot analysis of CYP2D6 expression in A549 whole cell lysate.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **CYP2D6 (2K6): sc-130366**, our highly recommended monoclonal alternative to CYP2D6 (N-20).