

# CYP26B1 (2G7): sc-293493

## BACKGROUND

The cytochrome P450 proteins (CYPs) are monooxygenases that catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids, and other lipids. P450 enzymes are classified into subfamilies based on sequence similarity. CYP26B1, also referred to as cytochrome P450 retinoic acid-inactivating 2 (P450RAI2) or CYP26A2, is a 512 amino acid major retinoic acid catabolic enzyme. CYP26B1 is involved in the specific inactivation of all-*trans*-retinoic acid (RA) as well as the generation of several hydroxylated forms of RA. Localized to the endoplasmic reticulum membrane and microsome membrane, CYP26B1 is expressed in brain, with highest expression in cerebellum and pons.

## REFERENCES

- Nelson, D.R. 1999. A second CYP26 P450 in humans and zebrafish: CYP26B1. *Arch. Biochem. Biophys.* 371: 345-347.
- White, J.A., et al. 2000. Identification of the human cytochrome P450, P450RAI-2, which is predominantly expressed in the adult cerebellum and is responsible for all-*trans*-retinoic acid metabolism. *Proc. Natl. Acad. Sci. USA* 97: 6403-6408.
- Trofimova-Griffin, M.E., et al. 2002. Developmental expression of cytochrome CYP26B1 (P450RAI-2) in human cephalic tissues. *Brain Res. Dev. Brain Res.* 136: 175-178.
- Taimi, M., et al. 2004. A novel human cytochrome P450, CYP26C1, involved in metabolism of 9-*cis* and all-*trans* isomers of retinoic acid. *J. Biol. Chem.* 279: 77-85.
- Nelson, D.R., et al. 2004. Comparison of cytochrome P450 (CYP) genes from the mouse and human genomes, including nomenclature recommendations for genes, pseudogenes and alternative-splice variants. *Pharmacogenetics* 14: 1-18.
- Rat, E., et al. 2006. Evidence for a functional genetic polymorphism of the human retinoic acid-metabolizing enzyme CYP26A1, an enzyme that may be involved in spina bifida. *Birth Defects Res. A Clin. Mol. Teratol.* 76: 491-498.
- Bowles, J., et al. 2006. Retinoid signaling determines germ cell fate in mice. *Science* 312: 596-600.
- Wan, C., et al. 2009. Positive association between ALDH1A2 and schizophrenia in the Chinese population. *Prog. Neuropsychopharmacol. Biol. Psychiatry* 33: 1491-1495.

## CHROMOSOMAL LOCATION

Genetic locus: CYP26B1 (human) mapping to 2p13.2.

## SOURCE

CYP26B1 (2G7) is a mouse monoclonal antibody raised against amino acids 131-230 representing partial length CYP26B1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CYP26B1 (2G7) is recommended for detection of CYP26B1 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).

Suitable for use as control antibody for CYP26B1 siRNA (h): sc-94853, CYP26B1 shRNA Plasmid (h): sc-94853-SH and CYP26B1 shRNA (h) Lentiviral Particles: sc-94853-V.

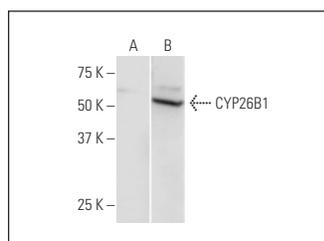
Molecular Weight of CYP26B1: 57 kDa.

Positive Controls: CYP26B1 transfected 293T whole cell lysate.

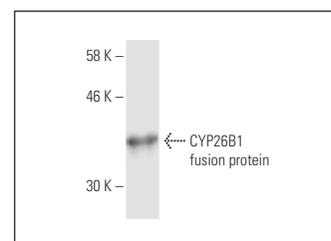
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CYP26B1 (2G7): sc-293493. Western blot analysis of CYP26B1 expression in non-transfected (A) and CYP26B1 transfected (B) 293T whole cell lysates.



CYP26B1 (2G7): sc-293493. Western blot analysis of human recombinant CYP26B1 fusion protein.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.