



# CYP4F2 (N-19): sc-46888

## BACKGROUND

The cytochrome P450 proteins 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 their sequence similarities. CYP4F isoforms are involved in the oxidation of important cellular mediators, such as leukotriene B4 (LTB4) and prostaglandins. CYP4F2 catalyzes  $\omega$ -hydroxylation of LTB4 to a less potent proinflammatory eicosanoid, 20-OH-LTB4, as well as arachidonic acid. CYP4F2 is expressed in liver and kidney. Its expression is repressed by peroxisomal proliferators and induced by retinoic acid. X-linked adrenoleukodystrophy (X-ALD) is a severe neurodegenerative disorder biochemically characterized by elevated levels of very long-chain fatty acids (VLCFA). CYP4F2 participates in the  $\omega$ -hydroxylation of VLCFAs, which may provide an alternative mode of treatment for X-ALD patients.

## REFERENCES

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3. Zhang, X., Chen, L. and Hardwick, J.P. 2000. Promoter activity and regulation of the CYP4F2 leukotriene B4  $\omega$ -hydroxylase gene by peroxisomal proliferators and retinoic acid in Hep G2 cells. *Arch. Biochem. Biophys.* 378: 364-376.
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## CHROMOSOMAL LOCATION

Genetic locus: CYP4F2 (human) mapping to 19p13.12; Cyp4f14 (mouse) mapping to 17 B1.

## SOURCE

CYP4F2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CYP4F2 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46888 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CYP4F2 (N-19) is recommended for detection of CYP4F2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); may cross-react with CYP4F12, CYP4F11, and CYP4F8.

Suitable for use as control antibody for CYP4F2 siRNA (h): sc-60488.

Molecular Weight of CYP4F2: 56 kDa.

## 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

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