SANTA CRUZ BIOTECHNOLOGY, INC.

# Cyp4f13 (G-5): sc-515735

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Cytochrome P450 proteins are heme-thiolate monooxygenases that mediate NADPH-dependent electron transport and function to oxidize a variety of structurally unrelated compounds, including steroids, fatty acids and xenobiotics. Specifically, cytochrome P450s are responsible for metabolizing arachidonic acid to hydroxyeicosatetraenoic acid (a regulator of blood pressure) and epoxyeicosatrienoic acid (a molecule involved in signaling events). Cyp4f13, (cytochrome P450, family 4, subfamily f, polypeptide 13), also known as Cypf13 or 0610030I10Rik, is a 523 amino acid murine protein that is encoded by a gene located on mouse chromosome 17 B1. The human homolog to Cyp4f13 is CYP4F3 (cytochrome P450 family 4 subfamily F member 3), also known as CPF3, CYP4F, LTB4H. CYP4F3 is a 520 amino acid member of the cytochrome P450 superfamily of enzymes and exists as two alternatively spliced isoforms, CYP4F3A and CYP4F3B. CYP4F3 may be involved in leukotriene B4 degradation.

## REFERENCES


1. Simpson, A.E. 1997. The cytochrome P450 4 (CYP4) family. Gen. Pharmacol. 28: 351-359.
2. Christmas, P., et al. 1999. Expression of the CYP4F3 gene. tissue-specific splicing and alternative promoters generate high and low $K^m$ forms of leukotriene $B_4$ ω-hydroxylase. J. Biol. Chem. 274: 21191-21199.
3. Bylund, J., et al. 2000. Identification of CYP4F8 in human seminal vesicles as a prominent 19-hydroxylase of prostaglandin endoperoxides. J. Biol. Chem. 275: 21844-21849.
4. Christmas, P., et al. 2001. Alternative splicing determines the function of CYP4F3 by switching substrate specificity. J. Biol. Chem. 276: 38166-38172.
5. Stark, K., et al. 2003. Expression of CYP4F8 (prostaglandin H 19-hydroxylase) in human epithelia and prominent induction in epidermis of psoriatic lesions. Arch. Biochem. Biophys. 409: 188-196.


## CHROMOSOMAL LOCATION

Genetic locus: CYP4F3 (human) mapping to 19p13.12; Cyp4f13 (mouse) mapping to 17 B1.

## SOURCE

Cyp4f13 (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 270-287 within an internal region of Cyp4f13 of mouse origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cyp4f13 (G-5) is available conjugated to agarose (sc-515735 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515735 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515735 PE), fluorescein (sc-515735 FITC), Alexa Fluor® 488 (sc-515735 AF488), Alexa Fluor® 546 (sc-515735 AF546), Alexa Fluor® 594 (sc-515735 AF594) or Alexa Fluor® 647 (sc-515735 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515735 AF680) or Alexa Fluor® 790 (sc-515735 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Cyp4f13 (G-5) is recommended for detection of CYP4F3 of human origin, Cyp4f13 of mouse origin and Cyp4f6 of rat origin by Western Blotting (starting dilution 1:100, 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 CYP4F3 siRNA (h): sc-105260, Cyp4f13 siRNA (m): sc-142729, CYP4F3 siRNA Plasmid (h): sc-105260-SH, Cyp4f13 shRNA Plasmid (m): sc-142729-SH, CYP4F3 siRNA (h) Lentiviral Particles: sc-105260-V and Cyp4f13 shRNA (m) Lentiviral Particles: sc-142729-V.

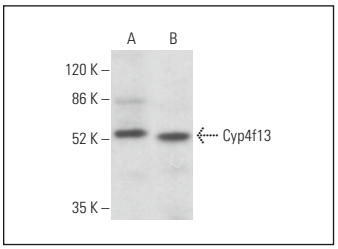
Molecular Weight of Cyp4f13: 65 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, IMR-32 cell lysate: sc-2409 or human cerebral cortex tissue extract.

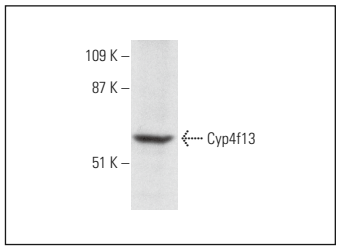
## RECOMMENDED SUPPORT REAGENTS

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




Cyp4f13 (G-5): sc-515735. Western blot analysis of Cyp4f13 expression in IMR-32 whole cell lysate (**A**) and human cerebral cortex tissue extract (**B**).




Cyp4f13 (G-5): sc-515735. Western blot analysis of Cyp4f13 expression in Neuro-2A whole cell lysate.

## 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.