SANTA CRUZ BIOTECHNOLOGY, INC.

CYP2F2 (F-9): sc-374540

BACKGROUND

CYP2F2 (cytochrome P450 2F2) is a murine-specific membrane-bound protein usually localized to the endoplasmic reticulum membrane. Cytochromes, which are incredibly polymorphic, generally catalyze redox reactions. CYP2F1 is a lung-specific cytochrome P450 (pigment at 450 nm) that is involved in metabolizing potentially carcinogenic pneumotoxins. Its polymorphic nature likely has an impact on the sensitivity of an individual to such toxins. Specifically within Clara cells, CYP2F2 converts napthalene (commonly found in mothballs) to a glutathione-dihydronapthalene conjugate which is implicated in causing necrosis in Clara cells. Napthalene has a similar chemical structure to that of skatole, which has been used to supplement flavor in cigarettes. CYP2F2 is the murine homolog of human CYP2F1.

CHROMOSOMAL LOCATION

Genetic locus: Cyp2f2 (mouse) mapping to 7 A3.

SOURCE

CYP2F2 (F-9) is a mouse monoclonal antibody raised against amino acids 189-262 mapping within an internal region of CYP2F2 of mouse origin.

PRODUCT

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

CYP2F2 (F-9) is available conjugated to agarose (sc-374540 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374540 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374540 PE), fluorescein (sc-374540 FITC), Alexa Fluor® 488 (sc-374540 AF488), Alexa Fluor® 546 (sc-374540 AF546), Alexa Fluor® 594 (sc-374540 AF594) or Alexa Fluor® 647 (sc-374540 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374540 AF680) or Alexa Fluor® 790 (sc-374540 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CYP2F2 (F-9) is recommended for detection of CYP2F2 of mouse and 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 CYP2F2 siRNA (m): sc-62183, CYP2F2 shRNA Plasmid (m): sc-62183-SH and CYP2F2 shRNA (m) Lentiviral Particles: sc-62183-V.

Molecular Weight of CYP2F2: 56 kDa.

Positive Controls: mouse lung extract: sc-2390, mouse liver extract: sc-2256 or CYP2F2 (m): 293T Lysate: sc-126690.

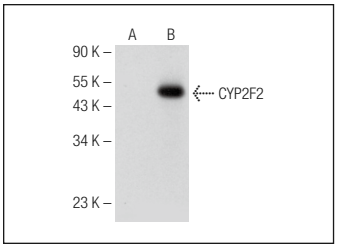
STORAGE

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

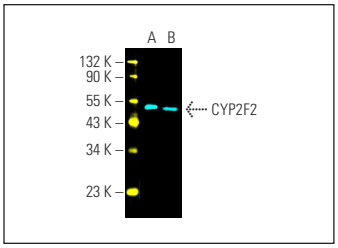
RESEARCH USE

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

DATA



CYP2F2 (F-9): sc-374540. Western blot analysis of CYP2F2 expression in non-transfected: sc-117752 (**A**) and mouse CYP2F2 transfected: sc-126690 (**B**) 293T whole cell lysates.



CYP2F2 (F-9) Alexa Fluor® 647: sc-374540 AF647. Direct fluorescent western blot analysis of CYP2F2 expression in mouse lung (**A**) and mouse liver (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.

SELECT PRODUCT CITATIONS

1. Lyu, Q., et al. 2020. Microwaving and fluorophore-tyramide for multiplex immunostaining on mouse adrenals—using unconjugated primary antibodies from the same host species. J. Vis. Exp. 156: 10.3791/60868.
2. Umbaugh, D.S., et al. 2021. Spatial reconstruction of the early hepatic transcriptomic landscape after an acetaminophen overdose using single-cell RNA sequencing. Toxicol. Sci. 182: 327-345.
3. Ogata, K., et al. 2021. Club cells are the primary target for permethrin-induced mouse lung tumor formation. Toxicol. Sci. 184: 15-32.
4. Kanti, M.M., et al. 2022. Adipose triglyceride lipase-mediated lipid catabolism is essential for bronchiolar regeneration. JCI Insight 7: e149438.
5. Hu, S., et al. 2022. Single-cell spatial transcriptomics reveals a dynamic control of metabolic zonation and liver regeneration by endothelial cell Wnt2 and Wnt9b. Cell Rep. Med. 3: 100754.
6. Akakpo, J.Y., et al. 2022. Desorption electrospray ionization mass spectrometry imaging allows spatial localization of changes in acetaminophen metabolism in the liver after intervention with 4-methylpyrazole. J. Am. Soc. Mass Spectrom. 33: 2094-2107.
7. Li, K., et al. 2022. DJ-1 governs airway progenitor cell/eosinophil interactions to promote allergic inflammation. J. Allergy Clin. Immunol. 150: 1178-1193.e13.
8. Sain Basu, D., et al. 2022. FMRP protects the lung from xenobiotic stress by facilitating the integrated stress response. J. Cell Sci. 135: jcs258652.
9. Fucho, R., et al. 2023. Zonal expression of StARD1 and oxidative stress in alcoholic-related liver disease. J. Lipid Res. 64: 100413.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.