

CYPOR (F-10): sc-25270



The Power to Question

BACKGROUND

P450 enzymes constitute a family of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. Several P450 enzymes have been classified by sequence similarities as members of the CYP1A and CYP2A subfamilies. CYPOR, also known as cytochrome P450 reductase and NADPH cytochrome P450 reductase, is a microsomal enzyme responsible for the transfer of electrons from NADPH to cytochrome P450 enzymes during the P450 catalytic cycle. CYPOR is localized to the endoplasmic reticulum, where it is also able to transfer electrons to heme oxygenase and cytochrome b5. CYPOR is structurally related to two separate flavoprotein families, ferredoxin nucleotide reductase (FNR) and flavodoxin. Electron transfer of CYPOR requires the binding of two flavin cofactors, FAD and FMN, to the FNR and flavodoxin domains, respectively.

CHROMOSOMAL LOCATION

Genetic locus: POR (human) mapping to 7q11.23; Por (mouse) mapping to 5 G2.

SOURCE

CYPOR (F-10) is a mouse monoclonal antibody raised against amino acids 1-300 of CYPOR of human 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.

CYPOR (F-10) is available conjugated to agarose (sc-25270 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25270 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25270 PE), fluorescein (sc-25270 FITC), Alexa Fluor® 488 (sc-25270 AF488), Alexa Fluor® 546 (sc-25270 AF546), Alexa Fluor® 594 (sc-25270 AF594) or Alexa Fluor® 647 (sc-25270 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25270 AF680) or Alexa Fluor® 790 (sc-25270 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CYPOR (F-10) is recommended for detection of CYPOR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), immunohistochemistry (including paraffin-embedded sections) (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 CYPOR siRNA (h): sc-35147, CYPOR siRNA (m): sc-35148, CYPOR siRNA (r): sc-156033, CYPOR shRNA Plasmid (h): sc-35147-SH, CYPOR shRNA Plasmid (m): sc-35148-SH, CYPOR shRNA Plasmid (r): sc-156033-SH, CYPOR shRNA (h) Lentiviral Particles: sc-35147-V, CYPOR shRNA (m) Lentiviral Particles: sc-35148-V and CYPOR shRNA (r) Lentiviral Particles: sc-156033-V.

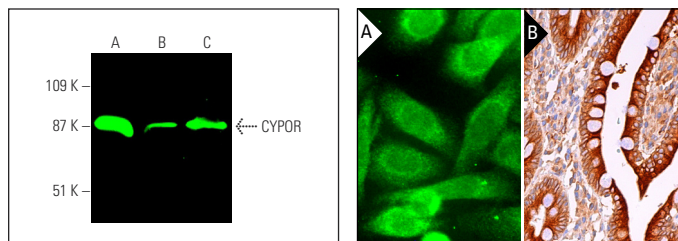
Molecular Weight of CYPOR: 76 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

STORAGE

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

DATA



CYPOR (F-10): sc-25270. Near-infrared western blot analysis of CYPOR expression in Hep G2 (A), A-431 (B) and HeLa (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

CYPOR (F-10): sc-25270. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

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- Dessaige, F., et al. 2009. Effects of ovariectomy in prepubertal goats. *J. Physiol. Pharmacol.* 60: 127-133.
- Yagita, Y., et al. 2013. Tail-anchored PEX26 targets peroxisomes via a PEX19-dependent and TRC40-independent class I pathway. *J. Cell Biol.* 200: 651-666.
- Ji, B., et al. 2014. Inhibition of protein translation by the DISC1-Boymaw fusion gene from a Scottish family with major psychiatric disorders. *Hum. Mol. Genet.* 23: 5683-5705.
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- Ghosh, J., et al. 2018. Cigarette smoke toxins-induced mitochondrial dysfunction and pancreatitis involves aryl hydrocarbon receptor mediated Cyp1 gene expression: protective effects of resveratrol. *Toxicol. Sci.* 166: 428-440.
- Shen, T., et al. 2019. Activation of the p38/MAPK pathway regulates autophagy in response to the CYPOR-dependent oxidative stress induced by zearalenone in porcine intestinal epithelial cells. *Food Chem. Toxicol.* 131: 110527.
- Miyauchi, Y., et al. 2020. UDP-glucuronosyltransferase (UGT)-mediated attenuations of cytochrome P450 3A4 activity: UGT isoform-dependent mechanism of suppression. *Br. J. Pharmacol.* 177: 1077-1089.

RESEARCH USE

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

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