

PPOX (C-12): sc-271768

BACKGROUND

Protoporphyrinogen oxidase, the penultimate enzyme in the heme biosynthetic pathway, catalyzes the six-electron oxidation of protoporphyrinogen IX to form protoporphyrin IX. The PPOX protein localizes to the inner membrane of mitochondria from various tissues, including heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Genetic deficiency of PPOX results in variegate porphyria, a low penetrance, autosomal dominant disorder characterized by cutaneous photosensitivity and/or various neurological manifestations. The rare homozygous variant of VP is characterized by severe PPOX deficiency and results in the onset of photosensitization by porphyrins in early childhood, skeletal abnormalities of the hand and, less constantly, short stature, mental retardation and convulsions.

CHROMOSOMAL LOCATION

Genetic locus: PPOX (human) mapping to 1q23.3; Ppox (mouse) mapping to 1 H3.

SOURCE

PPOX (C-12) is a mouse monoclonal antibody raised against amino acids 298-477 mapping at the C-terminus of PPOX 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.

PPOX (C-12) is available conjugated to agarose (sc-271768 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271768 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271768 PE), fluorescein (sc-271768 FITC), Alexa Fluor[®] 488 (sc-271768 AF488), Alexa Fluor[®] 546 (sc-271768 AF546), Alexa Fluor[®] 594 (sc-271768 AF594) or Alexa Fluor[®] 647 (sc-271768 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271768 AF680) or Alexa Fluor[®] 790 (sc-271768 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PPOX (C-12) is recommended for detection of PPOX of mouse, rat and human 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 PPOX siRNA (h): sc-44783, PPOX siRNA (m): sc-44784, PPOX shRNA Plasmid (h): sc-44783-SH, PPOX shRNA Plasmid (m): sc-44784-SH, PPOX shRNA (h) Lentiviral Particles: sc-44783-V and PPOX shRNA (m) Lentiviral Particles: sc-44784-V.

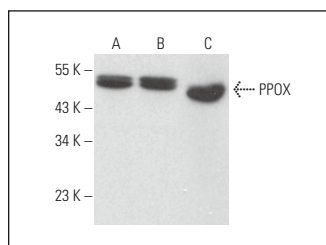
Molecular Weight of PPOX: 51 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Y79 cell lysate: sc-2240 or Caki-1 cell lysate: sc-2224.

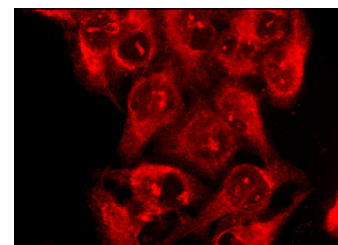
RECOMMENDED SUPPORT REAGENTS

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



PPOX (C-12): sc-271768. Western blot analysis of PPOX expression in K-562 (A), Y79 (B) and Caki-1 (C) whole cell lysates.



PPOX (C-12): sc-271768. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Palasuberniam, P., et al. 2019. Ferrochelatase deficiency abrogated the enhancement of aminolevulinic acid-mediated protoporphyrin IX by iron chelator deferoxamine. *Photochem. Photobiol.* 95: 1052-1059.
- Wang, X., et al. 2020. Enhancing selective photosensitizer accumulation and oxygen supply for high-efficacy photodynamic therapy toward glioma by 5-aminolevulinic acid loaded nanoplatfrom. *J. Colloid Interface Sci.* 565: 483-493.
- Zhang, B., et al. 2022. The chromatin remodeler CHD6 promotes colorectal cancer development by regulating TMEM65-mediated mitochondrial dynamics via EGF and Wnt signaling. *Cell Discov.* 8: 130.

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 for detailed protocols and support products.

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