SANTA CRUZ BIOTECHNOLOGY, INC.

ADX Reductase (E-2): sc-374436

BACKGROUND

Adrenodoxin Reductase (ADX Reductase) is a mitochondrial flavoprotein that receives electrons from NADPH and thereby initiates the electron-transport chain serving mitochondrial cytochromes P450. ADX Reductase participates in cholesterol side chain cleavage in all steroidogenic tissues, steroid 11-β hydroxylation in the adrenal cortex, 25-OH-vitamin D_3-24 hydroxylation in the kidney and sterol C-27 hydroxylation in the liver. Alternate splicing of ADX Reductase produces two isoforms. Human ADX Reductase maps to human chromosome 17q25.1.

CHROMOSOMAL LOCATION

Genetic locus: FDXR (human) mapping to 17q25.1; Fdxr (mouse) mapping to 11 E2.

SOURCE

ADX Reductase (E-2) is a mouse monoclonal antibody raised against amino acids 192-491 mapping at the C-terminus of Adrenodoxin Reductase of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADX Reductase (E-2) is available conjugated to agarose (sc-374436 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374436 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374436 PE), fluorescein (sc-374436 FITC), Alexa Fluor® 488 (sc-374436 AF488), Alexa Fluor® 546 (sc-374436 AF546), Alexa Fluor® 594 (sc-374436 AF594) or Alexa Fluor® 647 (sc-374436 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374436 AF680) or Alexa Fluor® 790 (sc-374436 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

ADX Reductase (E-2) is recommended for detection of ADX Reductase 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 ADX Reductase siRNA (h): sc-61906, ADX Reductase siRNA (m): sc-61907, ADX Reductase shRNA Plasmid (h): sc-61906-SH, ADX Reductase shRNA Plasmid (m): sc-61907-SH, ADX Reductase shRNA (h) Lentiviral Particles: sc-61906-V and ADX Reductase shRNA (m) Lentiviral Particles: sc-61907-V.

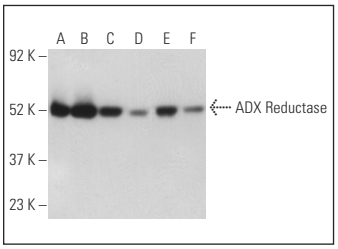
Molecular Weight of ADX Reductase: 51 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, 3T3-L1 cell lysate: sc-2243 or PC-12 cell lysate: sc-2250.

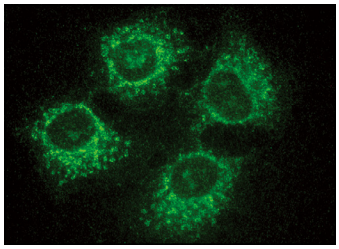
RECOMMENDED SUPPORT REAGENTS

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



ADX Reductase (E-2): sc-374436. Western blot analysis of ADX Reductase expression in K-562 (**A**), Hep G2 (**B**), A549 (**C**), 3T3-L1 (**D**), PC-12 (**E**) and C6 (**F**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



ADX Reductase (E-2): sc-374436. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Linares, C.I., et al. 2015. Sensitivity to anti-FAS is independent of increased cathepsin D activity and adrenodoxin reductase expression occurring in NOS-3 overexpressing Hep G2 cells. Biochim. Biophys. Acta 1853: 1182-1194.
2. Poli, G., et al. 2015. 2D-DIGE proteomic analysis identifies new potential therapeutic targets for adrenocortical carcinoma. Oncotarget 6: 5695-5706.
3. Druck, T., et al. 2019. Fhit-Fdxr interaction in the mitochondria: modulation of reactive oxygen species generation and apoptosis in cancer cells. Cell Death Dis. 10: 147.
4. Urban-Sosa, V.A., et al. 2019. Isocitrate dehydrogenase type 2 (IDH2) is part of a multiprotein complex for placental steroidogenesis. Placenta 87: 30-37.
5. Zhang, J., et al. 2020. FDXR regulates TP73 tumor suppressor via IRP2 to modulate aging and tumor suppression. J. Pathol. 251: 284-296.
6. Joshi, P.R., et al. 2023. Lipoylation is dependent on the ferredoxin FDX1 and dispensable under hypoxia in human cells. J. Biol. Chem. 299: 105075.

RESEARCH USE

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