

# ADX Reductase (H-300): sc-25846

## 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- $\beta$  hydroxylation in the adrenal cortex, 25-OH-vitamin D<sub>3</sub>-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.

## REFERENCES

1. Solish, S., et al. 1988. Human Adrenodoxin Reductase: two mRNAs encoded by a single gene on chromosome 17q24-q25 are expressed in steroidogenic tissues. *Proc. Nat. Acad. Sci. USA* 85: 7104-7108.
2. Sparkes, R., et al. 1991. Regional mapping of genes encoding human steroidogenic enzymes: P450scc to 15q23-q24; Adrenodoxin to 11q22; Adrenodoxin Reductase to 17q24-q25; and P450c17 to 10q24-q25. *DNA Cell Biol.* 10: 359-365.
3. Ziegler, G.A., et al. 1999. The structure of Adrenodoxin Reductase of mitochondrial P450 systems: electron transfer for steroid biosynthesis. *J. Mol. Biol.* 289: 981-990.
4. Hara, T., et al. 2000. Evidence for the cluster model of mitochondrial steroid hydroxylase system derived from dissociation constants of the complex between Adrenodoxin Reductase and Adrenodoxin. *Biochem. Biophys. Res. Commun.* 276: 210-215.
5. Li, J., et al. 2001. Adrenodoxin Reductase homolog (Arh1p) of yeast mitochondria required for iron homeostasis. *J. Biol. Chem.* 276: 1503-1509.

## CHROMOSOMAL LOCATION

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

## SOURCE

ADX Reductase (H-300) is a rabbit polyclonal antibody raised against amino acids 192-491 mapping at the C-terminus of Adrenodoxin Reductase of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

ADX Reductase (H-300) is recommended for detection of Adrenodoxin Reductase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

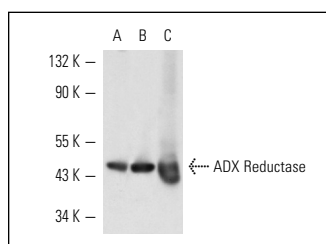
ADX Reductase (H-300) is also recommended for detection of Adrenodoxin Reductase in additional species, including equine, canine, bovine and porcine.

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.

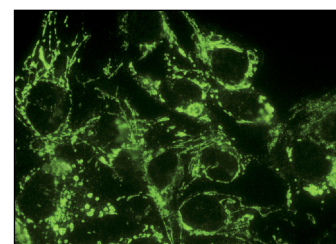
Molecular Weight of ADX Reductase: 51 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, SW-13 cell lysate: sc-24778 or rat adrenal gland extract: sc-364802.

## DATA



ADX Reductase (H-300): sc-25846. Western blot analysis of ADX Reductase expression in SW-13 (A) and Hep G2 (B) whole cell lysates and rat adrenal gland tissue extract (C).



ADX Reductase (H-300): sc-25846. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Wasilewski, M., et al. 2012. Optic atrophy 1-dependent mitochondrial re-modeling controls steroidogenesis in trophoblasts. *Curr. Biol.* 10: 1228-1234.

## RESEARCH USE

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

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Satisfaction  
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Try **ADX Reductase (E-2): sc-374436**, our highly recommended monoclonal alternative to ADX Reductase (H-300).