

Anti-ADX Antibody [JE63-56]

HA721329



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 19 kDa
Clone number:	JE63-56

Description: Adrenal ferredoxin (also adrenodoxin (ADX), adrenodoxin, mitochondrial, heptaredoxin, ferredoxin-1 (FDX1)) is a protein that in humans is encoded by the FDX1 gene. In addition to the expressed gene at this chromosomal locus (11q22), there are pseudogenes located on chromosomes 20 and 21. Adrenodoxin is a small iron-sulfur protein that can accept and carry a single electron. Adrenodoxin functions as an electron transfer protein in the mitochondrial cytochrome P450 systems. The first enzyme in this system is adrenodoxin reductase that carries an FAD. FAD can be reduced by two electrons donated from coenzyme NADPH. These two electrons are transferred one a time to adrenodoxin. Adrenodoxin in return reduces mitochondrial cytochrome P450. This particular oxidation/reduction system is involved in the synthesis of steroid hormones in steroidogenic tissues. In addition, similar systems also function in vitamin D and bile acid synthesis in the kidney and liver respectively. Adrenodoxin has been identified in a number of different tissues but all forms have been shown to be identical and are not tissue specific.

Immunogen: Synthetic peptide within Human ADX aa 51-100 / 184.

Positive control: Human placenta tissue, rat adrenal gland tissue, PC-12, SK-Br-3 cell lysate, K-562 cell lysate, HepG2 cell lysate, 293T cell lysate.

Subcellular location: Mitochondrion matrix.

Database links: SwissProt: P10109 Human | P46656 Mouse | P24483 Rat

Recommended Dilutions:

WB	1:500-1:1,000
IHC-P	1:200-1:1,000
IF-Cell	1:50

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

Technical: 0086-571-89986345

Service mail: support@huabio.cn

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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

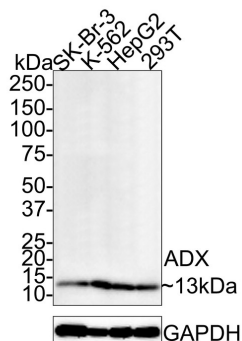
Fig1: Western blot analysis of ADX on different lysates with Rabbit anti-ADX antibody (HA721329) at 1/500 dilution.

Lane 1: SK-Br-3 cell lysate (15 µg/Lane)

Lane 2: K-562 cell lysate (15 µg/Lane)

Lane 3: HepG2 cell lysate (15 µg/Lane)

Lane 4: 293T cell lysate (15 µg/Lane)



Predicted band size: 19 kDa

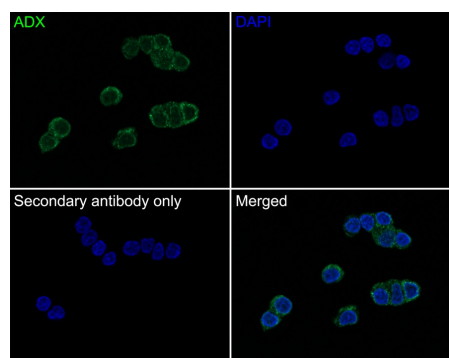
Observed band size: 13 kDa

Exposure time: 5 minutes;

4-20% SDS-PAGE gel.

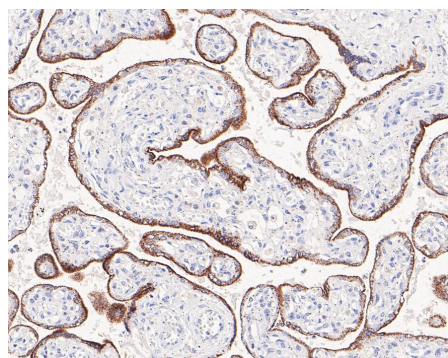
Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721329) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

Fig2: Immunocytochemistry analysis of PC-12 cells labeling ADX with Rabbit anti-ADX antibody (HA721329) at 1/50 dilution.



Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 °C, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-ADX antibody (HA721329) at 1/50 dilution in 2% negative goat serum overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Fig3: Immunohistochemical analysis of paraffin-embedded human placenta tissue with Rabbit anti-ADX antibody (HA721329) at 1/200 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721329) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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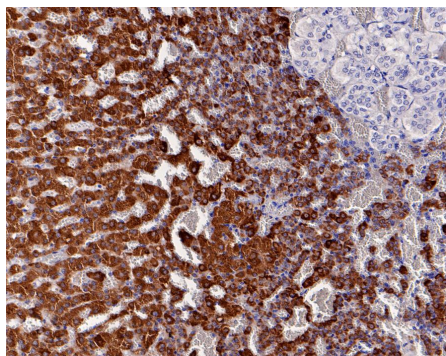


Fig4: Immunohistochemical analysis of paraffin-embedded rat adrenal gland tissue with Rabbit anti-ADX antibody (HA721329) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721329) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Zhang Z et al. FDX1 can Impact the Prognosis and Mediate the Metabolism of Lung Adenocarcinoma. Front Pharmacol. 2021 Oct
2. Wang Z et al. The role of FDX1 in granulosa cell of Polycystic ovary syndrome (PCOS). BMC Endocr Disord. 2021 Jun

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