abcam

Product datasheet

Anti-C11B2/CYP11B2 antibody [EPR10494] ab168388

Recombinant RabMAb

3 References 7 Images

Overview

Product name	Anti-C11B2/CYP11B2 antibody [EPR10494]
Description	Rabbit monoclonal [EPR10494] to C11B2/CYP11B2
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, mIHC **Unsuitable for:** ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human C11B2/CYP11B2 aa 1-100.
Positive control	Human adrenal gland lysate; Human kidney and liver tissues.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	pH: 7.20 Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR10494

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab168388 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 58 kDa.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
mIHC		Use at an assay dependent concentration.

Application notes Is unsuitable for ICC/IF.

Target

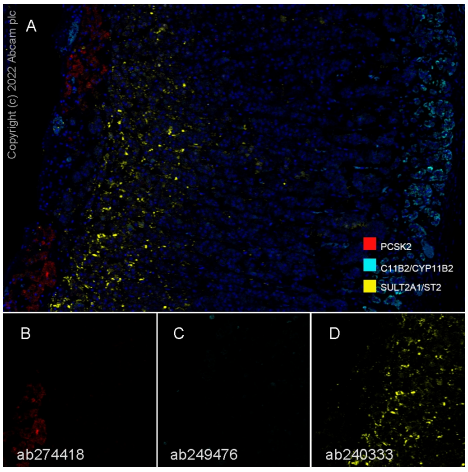
Function Preferentially catalyzes the conversion of 11-deoxycorticosterone to aldosterone via corticosterone and 18-hydroxycorticosterone.

Involvement in disease Defects in CYP11B2 are the cause of corticosterone methyloxidase type 1 deficiency (CMO-1 deficiency) [MIM:203400]; also known as aldosterone deficiency due to defect in 18-hydroxylase or aldosterone deficiency I. CMO-1 deficiency is an autosomal recessive disorder of aldosterone biosynthesis. There are two biochemically different forms of selective aldosterone deficiency be termed corticosterone methyloxidase (CMO) deficiency type 1 and type 2. In CMO-1 deficiency, aldosterone is undetectable in plasma, while its immediate precursor, 18-hydroxycorticosterone, is low or normal.
Defects in CYP11B2 are the cause of corticosterone methyloxidase type 2 deficiency (CMO-2 deficiency) [MIM:610600]. CMO-2 is an autosomal recessive disorder of aldosterone biosynthesis. In CMO-2 deficiency, aldosterone can be low or normal, but at the expense of increased secretion of 18-hydroxycorticosterone. Consequently, patients have a greatly increased ratio of 18-hydroxycorticosterone to aldosterone and a low ratio of corticosterone to 18-hydroxycorticosterone in serum.
Defects in CYP11B2 are a cause of familial hyperaldosteronism type 1 (FH1) [MIM:103900]. It is a disorder characterized by hypertension, variable hyperaldosteronism, and abnormal adrenal steroid production, including 18-oxocortisol and 18-hydroxycortisol. There is significant phenotypic heterogeneity, and some individuals never develop hypertension. Note=The molecular defect causing hyperaldosteronism familial type 1 is an anti-Lepore-type fusion of the CYP11B1 and CYP11B2 genes. The hybrid gene has the promoting part of CYP11B1, ACTH-sensitive, and the coding part of CYP11B2.

Sequence similarities Belongs to the cytochrome P450 family.

Cellular localization Mitochondrion membrane.

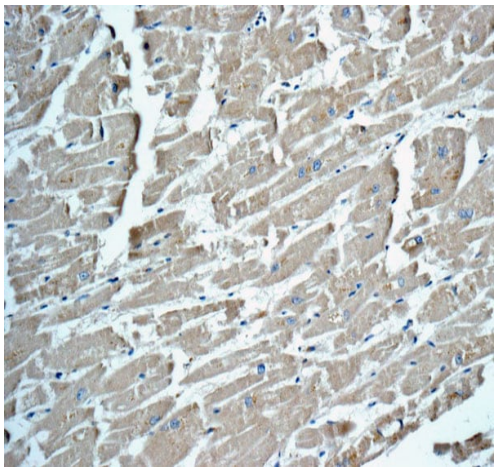
Images



Multiplex immunohistochemistry - Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

Fluorescence multiplex immunohistochemical analysis of human adrenal gland (formalin-fixed paraffin-embedded section). Panel A shows merged staining of anti-PCSK2 stained on adrenal medulla (**ab274418**; red; Opal™690) at 1:2000 (0.263 µg/ml) [Panel B], anti-C11B2/CYP11B2 stained on zona glomerulosa (**ab249476**; cyan; Opal™520) at 1:500 (4.478 µg/ml) [Panel C], and anti-SULT2A1 stained on zona reticularis (**ab240333**; yellow; Opal™570) at 1:500 (4.504 µg/ml) [Panel D] on human adrenal gland. DAPI was used as a nuclear counter stain. Followed by Opal Polymer HRP Ms + Rb secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope. The section was incubated in three rounds of staining: in the order of **ab274418**, **ab249476**, and **ab240333** for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins was used.

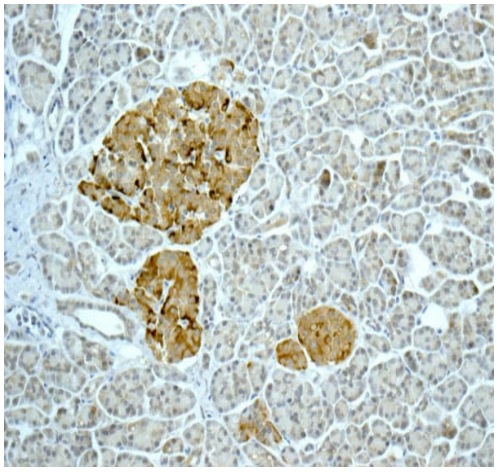
This data was developed using **ab249476**, the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

ab168388 showing +ve staining in Human heart muscle tissue.

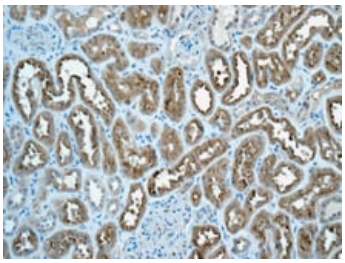
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

ab168388 showing +ve staining in Human normal pancreas tissue.

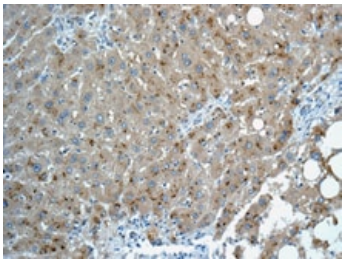
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling C11B2/CYP11B2 with ab168388 at 1/100 dilution.

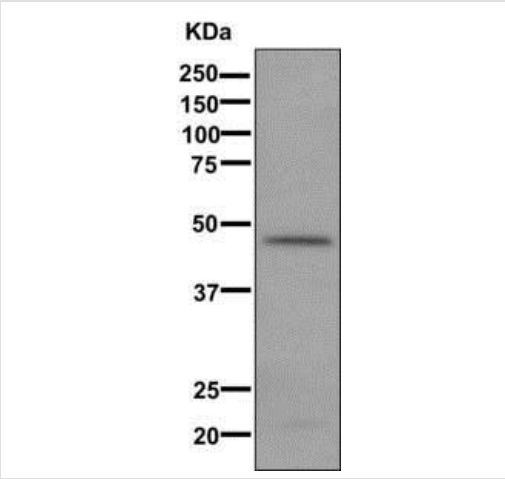
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling C11B2/CYP11B2 with ab168388 at 1/100 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388) at 1/1000 dilution + Human adrenal gland lysate at 10 µg

Secondary

Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 58 kDa

Anti-C11B2/CYP11B2 antibody [EPR10494] (ab168388)

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