abcam

Product datasheet

Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] ab125022

Recombinant RabMAb

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Overview

Product name	Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293]
Description	Rabbit monoclonal [EPR6293] to Cytochrome P450 17A1/CYP17A1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, ICC/IF, Flow Cyt (Intra) **Unsuitable for:** IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human Cytochrome P450 17A1/CYP17A1 aa 100-200. The exact sequence is proprietary. Database link: **P05093**
Positive control	WB: Human adrenal gland, mouse and rat heart lysates, human fetal heart lysate, SK-OV-3, HeLa and Jurkat lysates; Flow Cyt (intra): HeLa cells ICC/IF: HeLa cells
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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, PBS, 0.05% BSA
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR6293
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab125022 in the following tested applications.

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

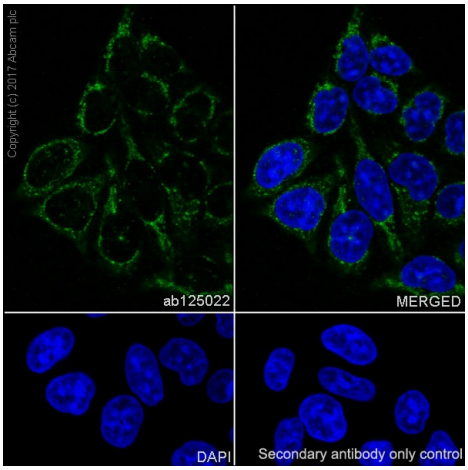
Application	Abreviews	Notes
WB	★★★★☆ (1)	1/1000 - 1/10000. Detects a band of approximately 55 kDa (predicted molecular weight: 57 kDa).
IP		1/10 - 1/100.
ICC/IF	★★★★★ (1)	1/100 - 1/250.
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Application notes Is unsuitable for IHC-P.

Target

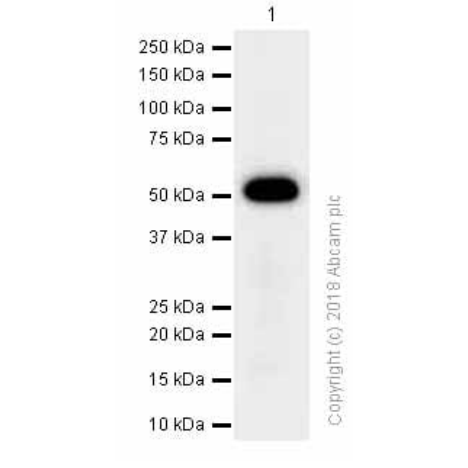
Function	Conversion of pregnenolone and progesterone to their 17-alpha-hydroxylated products and subsequently to dehydroepiandrosterone (DHEA) and androstenedione. Catalyzes both the 17-alpha-hydroxylation and the 17,20-lyase reaction. Involved in sexual development during fetal life and at puberty.
Pathway	Lipid metabolism; steroid biosynthesis.
Involvement in disease	Defects in CYP17A1 are the cause of adrenal hyperplasia type 5 (AH5) [MIM:202110]. AH5 is a form of congenital adrenal hyperplasia, a common recessive disease due to defective synthesis of cortisol. Congenital adrenal hyperplasia is characterized by androgen excess leading to ambiguous genitalia in affected females, rapid somatic growth during childhood in both sexes with premature closure of the epiphyses and short adult stature. Four clinical types: "salt wasting" (SW, the most severe type), "simple virilizing" (SV, less severely affected patients), with normal aldosterone biosynthesis, "non-classic form" or late onset (NC or LOAH), and "cryptic" (asymptomatic).
Sequence similarities	Belongs to the cytochrome P450 family.
Post-translational modifications	Phosphorylation is necessary for 17,20-lyase, but not for 17-alpha-hydroxylase activity.
Cellular localization	Membrane.

Images



Immunocytochemistry/ Immunofluorescence - Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022)

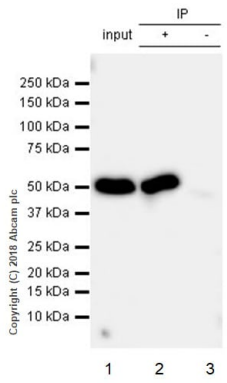
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Cytochrome P450 17A1/CYP17A1 with Purified ab125022 at 1:100 dilution (3.4 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with none. Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Western blot - Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022)

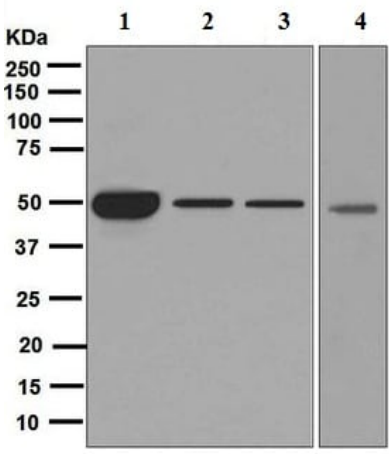
Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022) at 1/2000 dilution (purified) + Human fetal heart lysates at 15 µg

Predicted band size: 57 kDa



Immunoprecipitation - Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022)

ab125022 (purified) at 1:30 dilution (2µg) immunoprecipitating Cytochrome P450 17A1/CYP17A1 in Human fetal heart lysate.
Lane 1 (input): Human fetal heart lysate 10µg
Lane 2 (+): ab125022 & Human fetal heart lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab125022 in Human fetal heart lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.



Western blot - Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022)

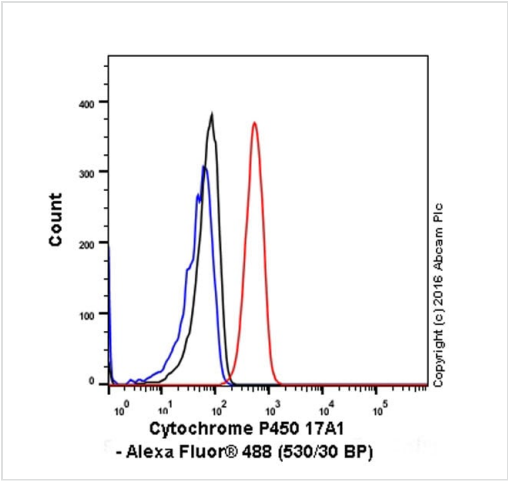
All lanes : Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022) at 1/1000 dilution

Lane 1 : Human adrenal gland lysate
Lane 2 : SK-OV-3 lysate
Lane 3 : HeLa lysate
Lane 4 : Jurkat lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 57 kDa
Observed band size: 55 kDa



Flow Cytometry (Intracellular) - Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022)

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Cytochrome P450 17A1/CYP17A1 with purified ab125022 at 1/220 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.

Anti-Cytochrome P450 17A1/CYP17A1 antibody [EPR6293] (ab125022)

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