**Product datasheet**

**Anti-CYP11A1 antibody ab75497**

12 References 8 Images

**Overview**

**Product name**  Anti-CYP11A1 antibody  
**Description**  Rabbit polyclonal to CYP11A1  
**Host species**  Rabbit  
**Tested applications**  Suitable for: ICC/IF, IP, IHC-P, WB, ELISA  
**Species reactivity**  Reacts with: Human  
**Immunogen**  Synthetic peptide corresponding to Human CYP11A1 aa 288-337 (internal sequence). Sequence:  
LRQKGSVHHDYRGILYRLLGDSKMSFEDIKANVTEMLA  
GGVDTTSMTLQW

**Positive control**  HeLa whole cell lysate (ab150035).

**Properties**

**Form**  Liquid  
**Storage instructions**  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.  
**Storage buffer**  Preservative: 0.09% Sodium azide  
Constituents: 2% Sucrose, PBS  
**Purity**  Immunogen affinity purified  
**Clonality**  Polyclonal  
**Isotype**  IgG

**Applications**

Our Abpromise guarantee covers the use of ab75497 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 1 µg/ml.</td>
</tr>
</tbody>
</table>
**Function**
Catalyzes the side-chain cleavage reaction of cholesterol to pregnenolone.

**Pathway**
Lipid metabolism; C21-steroid hormone metabolism.

**Involvement in disease**
Defects in CYP11A1 are a cause of congenital adrenal insufficiency (CAI). Defects in CYP11A1 are a cause of congenital lipoid adrenal hyperplasia (CLAH) [MIM:201710]; also known as lipoid CAH. CLAH is the most severe form of adrenal hyperplasia. This autosomal recessive and potentially lethal condition includes the onset of profound adrenocortical insufficiency shortly after birth, hyperpigmentation reflecting increased production of pro-opiomelanocortin, elevated plasma renin activity as a consequence of reduced aldosterone synthesis, and male pseudohermaphroditism resulting from deficient fetal testicular testosterone synthesis. CLAH is a rare disease, except in Japan and Korea where it accounts for a significant percentage of cases of congenital adrenal hyperplasia.

**Sequence similarities**
Belongs to the cytochrome P450 family.

**Cellular localization**
Mitochondrion membrane.

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**Application**

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
</tr>
<tr>
<td>WB</td>
<td></td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 60 kDa (predicted molecular weight: 60 kDa). Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.</td>
</tr>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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</tbody>
</table>

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**Target**

**Function**
Catalyzes the side-chain cleavage reaction of cholesterol to pregnenolone.

**Pathway**
Lipid metabolism; C21-steroid hormone metabolism.

**Involvement in disease**
Defects in CYP11A1 are a cause of congenital adrenal insufficiency (CAI). Defects in CYP11A1 are a cause of congenital lipoid adrenal hyperplasia (CLAH) [MIM:201710]; also known as lipoid CAH. CLAH is the most severe form of adrenal hyperplasia. This autosomal recessive and potentially lethal condition includes the onset of profound adrenocortical insufficiency shortly after birth, hyperpigmentation reflecting increased production of pro-opiomelanocortin, elevated plasma renin activity as a consequence of reduced aldosterone synthesis, and male pseudohermaphroditism resulting from deficient fetal testicular testosterone synthesis. CLAH is a rare disease, except in Japan and Korea where it accounts for a significant percentage of cases of congenital adrenal hyperplasia.

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Mitochondrion membrane.

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**Images**

Western blot - Anti-CYP11A1 antibody (ab75497) at 1 µg/ml + HeLa cell lysate at 10 µg

**Secondary**
HRP conjugated anti-Rabbit IgG at 1/50000 dilution

**Predicted band size:** 60 kDa
**Observed band size:** 60 kDa
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP11A1 antibody (ab75497)

Immunohistochemistry with HK2 cells.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP11A1 antibody (ab75497)

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP11A1 antibody (ab75497)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human placenta tissue labelling CYP11A1 with ab75497 at 5.0ug/ml.
CYP11A1 was immunoprecipitated using 0.5mg Hela whole cell extract, 5µg of Rabbit polyclonal to CYP11A1 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab75497.

ICC/IF image of ab75497 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab75497, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

IHC image of ab75497 staining in human cervical carcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab75497, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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