Anti-CYP17A1 Antibody [JB93-32]

ET7107-61

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Tissue
Molecular Wt:	Predicted band size: 57 kDa
Clone number:	JB93-32

Description: Cytochrome P450 17A1 (steroid 17α-monooxygenase, 17α-hydroxylase, 17-alpha-hydroxylase, 17,20-lyase, 17,20-desmolase) is an enzyme of the hydroxylase type that in humans is encoded by the CYP17A1 gene on chromosome 10. It is ubiquitously expressed in many tissues and cell types, including the zona reticularis and zona fasciculata of the adrenal cortex as well as gonadal tissues. CYP17A1 is a member of the cytochrome P450 superfamily of enzymes localized in the endoplasmic reticulum. Proteins in this family are monooxygenases that catalyze synthesis of cholesterol, steroids and other lipids and are involved in drug metabolism. CYP17A1 has both 17α-hydroxylase activity (EC 1.14.14.19) and 17,20-lyase activity (EC 1.14.14.32). The 17α-hydroxylase activity of CYP17A1 is required for the generation of glucocorticoids such as cortisol, but both the hydroxylase and 17,20-lyase activities of CYP17A1 are required for the production of androgenic and oestrogenic sex steroids by converting 17α-hydroxypregnenolone to dehydroepiandrosterone (DHEA).

Immunogen: Recombinant protein within Human CYP17A1 aa 81-240 / 508.

Positive control: HepG2 cell lysate, HeLa cell lysate, Jurkat cell lysate, Mouse brain tissue lysate, Mouse testis tissue lysate, Rat testis tissue lysate, Rat brain tissue lysate, human kidney tissue, mouse kidney tissue.

Subcellular location: Membrane.

Database links: SwissProt: P05093 Human | P27786 Mouse | P11715 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
IF-Tissue	1:200

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

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

Purity: Protein A affinity purified.

Images

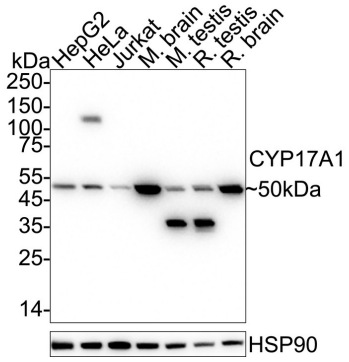

Fig1: Western blot analysis of CYP17A1 on different lysates with Rabbit anti-CYP17A1 antibody (ET7107-61) at 1/1,000 dilution.

Lane 1: HepG2 cell lysate (20 µg/Lane)
Lane 2: HeLa cell lysate (20 µg/Lane)
Lane 3: Jurkat cell lysate (20 µg/Lane)
Lane 4: Mouse brain tissue lysate (40 µg/Lane)
Lane 5: Mouse testis tissue lysate (40 µg/Lane)
Lane 6: Rat testis tissue lysate (40 µg/Lane)
Lane 7: Rat brain tissue lysate (40 µg/Lane)

Predicted band size: 57 kDa
Observed band size: 50 kDa

Exposure time: 20 seconds; ECL: K1801;

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 (ET7107-61) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

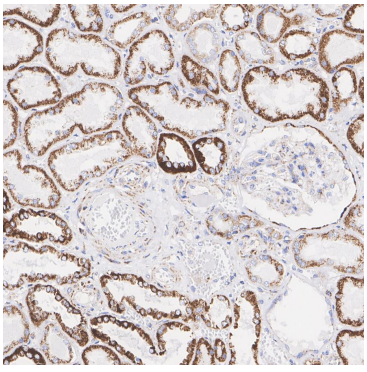

Fig2: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-CYP17A1 antibody (ET7107-61) at 1/1,000 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (ET7107-61) 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.

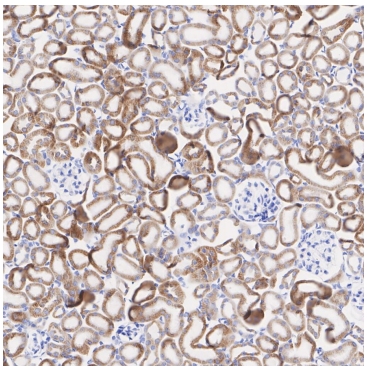

Fig3: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-CYP17A1 antibody (ET7107-61) at 1/1,000 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (ET7107-61) 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.

Background References

1. DeVore N M et al. Structures of cytochrome P450 17A1 with prostate cancer drugs abiraterone and TOK-001. Nature 482:116-119 (2012).
2. Lin D et al. Missense mutation serine106-->proline causes 17 alpha-hydroxylase deficiency. J Biol Chem 266:15992-15998 (1991).