

CYP11B1/2 (H-300): sc-28205

BACKGROUND

The steroid 11 β -hydroxylase gene, also designated Cyp11 β -1, is a marker for the functional differentiation of cells in the zona fasciculata reticularis. The deduced protein CYP11B1 consists of 466 amino acids containing a secretory signal, epidermal growth factor-like repeats, and a proteolytically inactive cathepsin B-related sequence. A related protein, human aldosterone synthase (CYP11B2), is involved in substrate recognition and conversion, with a functionally significant residue 112 in the N-terminal region of human CYP11B2. The inherited disorder glucocorticoid-remediable aldosteronism is caused by a chimeric gene duplication between the CYP11B1 and CYP11B2 genes. This disorder is characterized by hyperaldosteronism and high levels of 18-hydroxycortisol and 18-oxocortisol, which are under ACTH control.

REFERENCES

1. Fardella, C.E., Pinto, M., Mosso, L., Gómez-Sánchez, C., Jalil, J. and Montero, J. 2001. Genetic study of patients with dexamethasone-suppressible aldosteronism without the chimeric CYP11B1/CYP11B2 gene. *J. Clin. Endocrinol. Metab.* 86: 4805-4807.
2. Bechtel, S., Belkina, N. and Bernhardt, R. 2002. The effect of amino-acid substitutions I112P, D147E and K152N in CYP11B2 on the catalytic activities of the enzyme. *Eur. J. Biochem.* 269: 1118-1127.
3. Mukai, K., Mitani, F., Nagasawa, H., Suzuki, R., Suzuki, T., Suematsu, M. and Ishimura, Y. 2003. An inverse correlation between expression of a preprocathepsin B-related protein with cysteine-rich sequences and steroid 11 β -hydroxylase in adrenocortical cells. *J. Biol. Chem.* 278: 17084-17092.

CHROMOSOMAL LOCATION

Genetic locus: CYP11B1/CYP11B2 (human) mapping to 8q24.3.

SOURCE

CYP11B1/2 (H-300) is a rabbit polyclonal antibody raised against amino acids 204-503 (deletion 401-466) mapping at the C-terminus of CYP11B1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

CYP11B1/2 (H-300) is recommended for detection of CYP11B1 and CYP11B2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

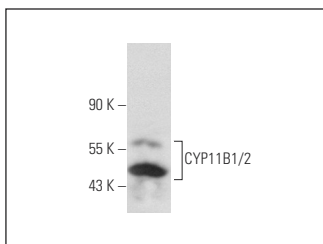
Molecular Weight of CYP11B1/2: 48 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

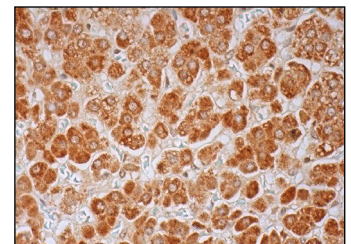
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



CYP11B1/2 (H-300): sc-28205. Western blot analysis of CYP11B1/2 expression in MCF7 whole cell lysate.



CYP11B1/2 (H-300): sc-28205. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **CYP11B1 (H-11): sc-374096**, our highly recommended monoclonal alternative to CYP11B1/2 (H-300).