

# 11 $\beta$ -HSD1 Polyclonal Antibody

Catalog # AP73743

## Product Information

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<b>Application</b>	WB, IHC, IF, ICC, E
<b>Primary Accession</b>	<a href="#">P28845</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	32401

## Additional Information

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<b>Gene ID</b>	3290
<b>Other Names</b>	HSD11B1; HSD11; HSD11L; Corticosteroid 11-beta-dehydrogenase isozyme 1; 11-beta-hydroxysteroid dehydrogenase 1; 11-DH; 11-beta-HSD1
<b>Dilution</b>	WB--Western Blot: 1/500 - 1/2000. IHC-p: 1:100-1:300. ELISA: 1/10000. Not yet tested in other applications. IHC--1:100~500 IF--1:50~200 ICC--N/A E--N/A
<b>Format</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
<b>Storage Conditions</b>	-20°C

## Protein Information

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<b>Name</b>	HSD11B1 ( <a href="#">HGNC:5208</a> )
<b>Synonyms</b>	HSD11, HSD11L, SDR26C1
<b>Function</b>	Controls the reversible conversion of biologically active glucocorticoids such as cortisone to cortisol, and 11- dehydrocorticosterone to corticosterone in the presence of NADP(H) (PubMed: <a href="#">10497248</a> , PubMed: <a href="#">12460758</a> , PubMed: <a href="#">14973125</a> , PubMed: <a href="#">15152005</a> , PubMed: <a href="#">15280030</a> , PubMed: <a href="#">17593962</a> , PubMed: <a href="#">21453287</a> , PubMed: <a href="#">27927697</a> , PubMed: <a href="#">30902677</a> ). Participates in the corticosteroid receptor-mediated anti-inflammatory response, as well as metabolic and homeostatic processes (PubMed: <a href="#">10497248</a> , PubMed: <a href="#">12414862</a> , PubMed: <a href="#">15152005</a> , PubMed: <a href="#">21453287</a> ). Plays a role in the secretion of aqueous humor in the eye, maintaining a normotensive, intraocular environment (PubMed: <a href="#">11481269</a> ). Bidirectional in vitro, predominantly functions as a reductase in vivo, thereby increasing the concentration of active glucocorticoids (PubMed: <a href="#">10497248</a> , PubMed: <a href="#">11481269</a> , PubMed: <a href="#">12414862</a> , PubMed: <a href="#">12460758</a> ). It has broad substrate specificity, besides glucocorticoids, it accepts other steroid and

sterol substrates (PubMed:[15095019](#), PubMed:[15152005](#), PubMed:[17593962](#), PubMed:[21453287](#)). Interconverts 7-oxo- and 7-hydroxy-neurosteroids such as 7-oxopregnenolone and 7 $\beta$ -hydroxypregnenolone, 7-oxodehydroepiandrosterone (3 $\beta$ -hydroxy-5-androstene-7,17-dione) and 7 $\beta$ -hydroxydehydroepiandrosterone (3 $\beta$ ,7 $\beta$ -dihydroxyandrost-5-en-17-one), among others (PubMed:[17593962](#)). Catalyzes the stereo-specific conversion of the major dietary oxysterol, 7-ketocholesterol (7-oxocholesterol), into the more polar 7- $\beta$ -hydroxycholesterol metabolite (PubMed:[15095019](#), PubMed:[15152005](#)). 7-oxocholesterol is one of the most important oxysterols, it participates in several events such as induction of apoptosis, accumulation in atherosclerotic lesions, lipid peroxidation, and induction of foam cell formation (PubMed:[15095019](#)). Mediates the 7-oxo reduction of 7-oxolithocholate mainly to chenodeoxycholate, and to a lesser extent to ursodeoxycholate, both in its free form and when conjugated to glycine or taurine, providing a link between glucocorticoid activation and bile acid metabolism (PubMed:[21453287](#)). Catalyzes the synthesis of 7- $\beta$ -25-dihydroxycholesterol from 7-oxo-25-hydroxycholesterol in vitro, which acts as a ligand for the G-protein-coupled receptor (GPCR) Epstein-Barr virus-induced gene 2 (EBI2) and may thereby regulate immune cell migration (PubMed:[30902677](#)).

### Cellular Location

Endoplasmic reticulum membrane; Single-pass type II membrane protein

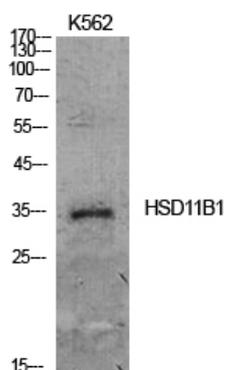
### Tissue Location

Widely expressed, highest expression in liver, lower in testis, ovary, lung, foreskin fibroblasts, and much lower in kidney (PubMed:[1885595](#)). Expressed in liver (at protein level) (PubMed:[21453287](#)). Expressed in the basal cells of the corneal epithelium and in the ciliary nonpigmented epithelium (both at mRNA and at protein level) (PubMed:[11481269](#)).

## Background

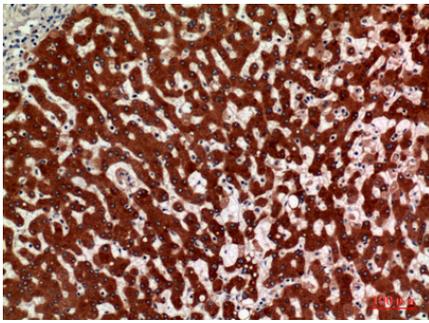
Catalyzes reversibly the conversion of cortisol to the inactive metabolite cortisone. Catalyzes reversibly the conversion of 7-ketocholesterol to 7- $\beta$ -hydroxycholesterol. In intact cells, the reaction runs only in one direction, from 7- ketocholesterol to 7- $\beta$ -hydroxycholesterol (By similarity).

## Images

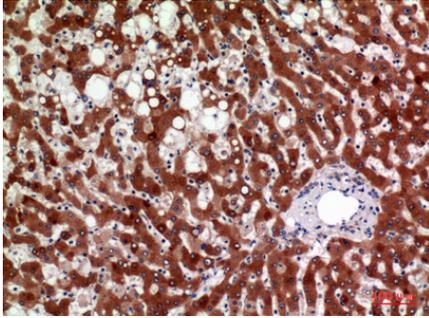


Western Blot analysis of K562 cells using 11 $\beta$ -HSD1 Polyclonal Antibody. Antibody was diluted at 1:500. Secondary antibody was diluted at 1:20000

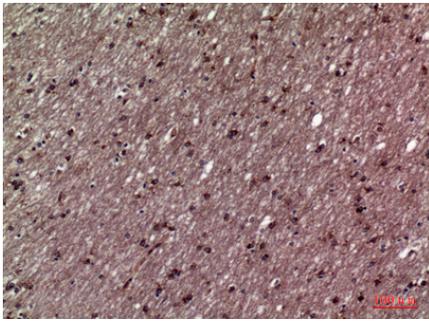
Immunohistochemical analysis of paraffin-embedded human-liver, antibody was diluted at 1:100



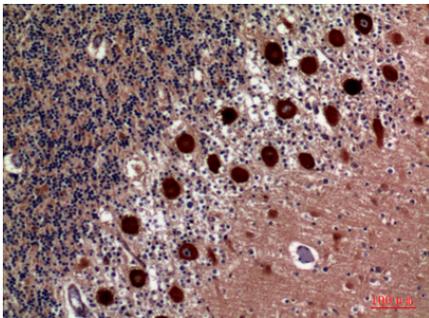
Immunohistochemical analysis of paraffin-embedded human-liver, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded human-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded human-brain, antibody was diluted at 1:100



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