

**Anti-HSD11B1 Antibody**  
**Catalog # ABO10696****Specification**

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**Anti-HSD11B1 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P28845</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Corticosteroid 11-beta-dehydrogenase isozyme 1(HSD11B1) detection. Tested with WB, IHC-P, IHC-F, ICC in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-HSD11B1 Antibody - Additional Information**

**Gene ID** 3290

**Other Names**

Corticosteroid 11-beta-dehydrogenase isozyme 1, 1.1.1.146, 11-beta-hydroxysteroid dehydrogenase 1, 11-DH, 11-beta-HSD1, Short chain dehydrogenase/reductase family 26C member 1, HSD11B1, HSD11, HSD11L, SDR26C1

**Calculated MW**

32401 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat  
Immunocytochemistry , 0.5-1 µg/ml, Human, -  
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Mouse, Rat, -  
Western blot, 0.1-0.5 µg/ml, Human

**Subcellular Localization**

Endoplasmic reticulum membrane ; Single-pass type II membrane protein .

**Tissue Specificity**

Widely expressed. Highest expression in liver.

**Protein Name**

Corticosteroid 11-beta-dehydrogenase isozyme 1

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human

HSD11B1(131-145aa DDIHHVRKSMEVNFL), different from the mouse sequence by two amino acids.

#### **Purification**

Immunogen affinity purified.

#### **Cross Reactivity**

No cross reactivity with other proteins

#### **Storage**

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

### **Anti-HSD11B1 Antibody - Protein Information**

**Name** HSD11B1 ([HGNC:5208](#))

**Synonyms** HSD11, HSD11L, SDR26C1

#### **Function**

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="http://www.uniprot.org/citations/10497248" target="\_blank">10497248</a>, PubMed:<a href="http://www.uniprot.org/citations/12460758" target="\_blank">12460758</a>, PubMed:<a href="http://www.uniprot.org/citations/14973125" target="\_blank">14973125</a>, PubMed:<a href="http://www.uniprot.org/citations/15152005" target="\_blank">15152005</a>, PubMed:<a href="http://www.uniprot.org/citations/15280030" target="\_blank">15280030</a>, PubMed:<a href="http://www.uniprot.org/citations/17593962" target="\_blank">17593962</a>, PubMed:<a href="http://www.uniprot.org/citations/21453287" target="\_blank">21453287</a>, PubMed:<a href="http://www.uniprot.org/citations/27927697" target="\_blank">27927697</a>, PubMed:<a href="http://www.uniprot.org/citations/30902677" target="\_blank">30902677</a>). Participates in the corticosteroid receptor-mediated anti-inflammatory response, as well as metabolic and homeostatic processes (PubMed:<a href="http://www.uniprot.org/citations/12414862" target="\_blank">12414862</a>, PubMed:<a href="http://www.uniprot.org/citations/10497248" target="\_blank">10497248</a>, PubMed:<a href="http://www.uniprot.org/citations/15152005" target="\_blank">15152005</a>, PubMed:<a href="http://www.uniprot.org/citations/21453287" target="\_blank">21453287</a>). Plays a role in the secretion of aqueous humor in the eye, maintaining a normotensive, intraocular environment (PubMed:<a href="http://www.uniprot.org/citations/11481269" target="\_blank">11481269</a>). Bidirectional in vitro, predominantly functions as a reductase in vivo, thereby increasing the concentration of active glucocorticoids (PubMed:<a href="http://www.uniprot.org/citations/12414862" target="\_blank">12414862</a>, PubMed:<a href="http://www.uniprot.org/citations/10497248" target="\_blank">10497248</a>, PubMed:<a href="http://www.uniprot.org/citations/11481269" target="\_blank">11481269</a>, PubMed:<a href="http://www.uniprot.org/citations/12460758" target="\_blank">12460758</a>). It has broad substrate specificity, besides glucocorticoids, it accepts other steroid and sterol substrates (PubMed:<a href="http://www.uniprot.org/citations/15095019" target="\_blank">15095019</a>, PubMed:<a href="http://www.uniprot.org/citations/15152005" target="\_blank">15152005</a>, PubMed:<a href="http://www.uniprot.org/citations/17593962" target="\_blank">17593962</a>, PubMed:<a href="http://www.uniprot.org/citations/21453287" target="\_blank">21453287</a>). Interconverts 7-oxo- and 7-hydroxy-neurosteroids such as 7- oxopregnenolone and 7beta-hydroxypregnenolone, 7- oxodehydroepiandrosterone (3beta-hydroxy-5-androstene-7,17-dione) and 7beta-hydroxydehydroepiandrosterone (3beta,7beta-dihydroxyandrost-5-en- 17-one), among others (PubMed:<a href="http://www.uniprot.org/citations/17593962" target="\_blank">17593962</a>)

target="\_blank">17593962</a>). Catalyzes the stereo-specific conversion of the major dietary oxysterol, 7-ketcholesterol (7- oxocholesterol), into the more polar 7-beta-hydroxycholesterol metabolite (PubMed:<a href="http://www.uniprot.org/citations/15095019" target="\_blank">15095019</a>, PubMed:<a href="http://www.uniprot.org/citations/15152005" target="\_blank">15152005</a>). 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:<a href="http://www.uniprot.org/citations/15095019" target="\_blank">15095019</a>). 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:<a href="http://www.uniprot.org/citations/21453287" target="\_blank">21453287</a>). 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:<a href="http://www.uniprot.org/citations/30902677" target="\_blank">30902677</a>).

### Cellular Location

Endoplasmic reticulum membrane; Single-pass type II membrane protein

### Tissue Location

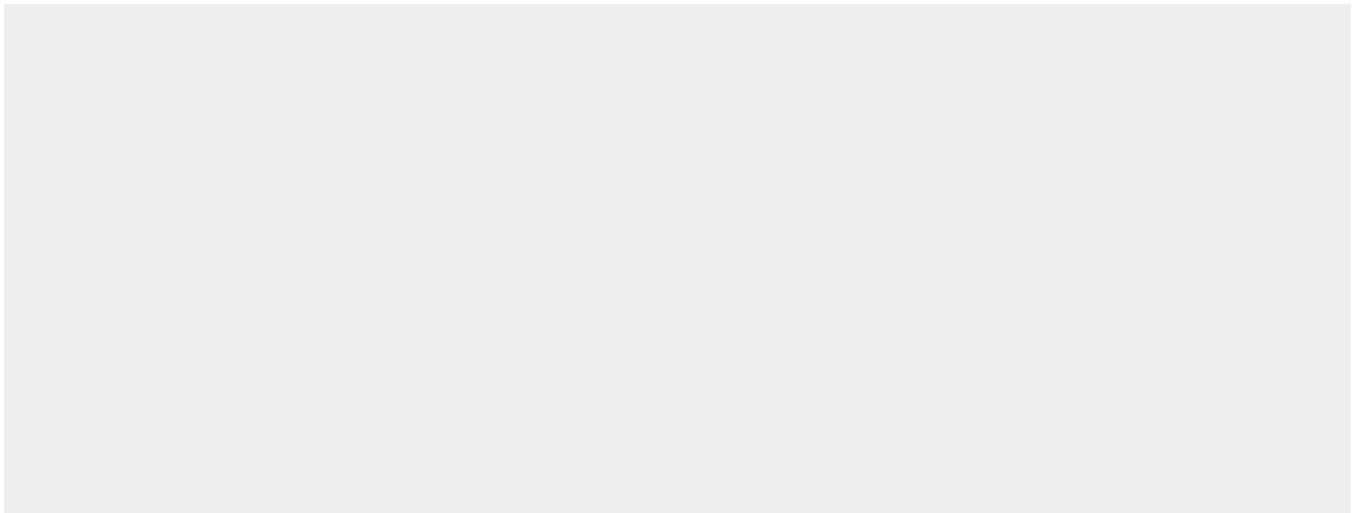
Widely expressed, highest expression in liver, lower in testis, ovary, lung, foreskin fibroblasts, and much lower in kidney (PubMed:1885595). Expressed in liver (at protein level) (PubMed:21453287). Expressed in the basal cells of the corneal epithelium and in the ciliary nonpigmented epithelium (both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

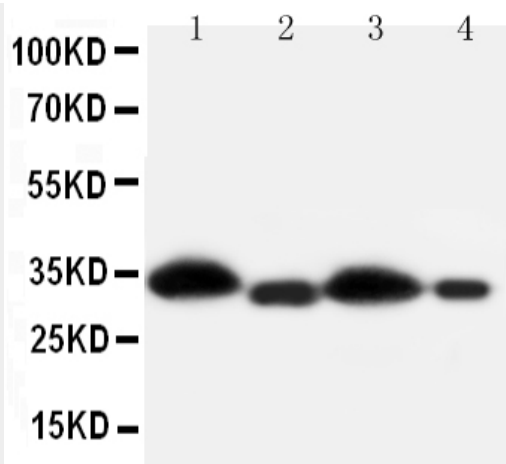
## Anti-HSD11B1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

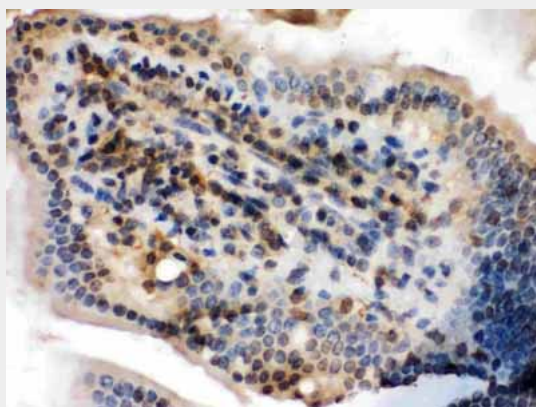
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-HSD11B1 Antibody - Images

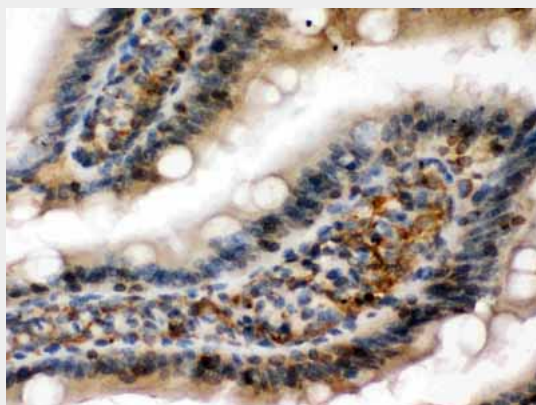




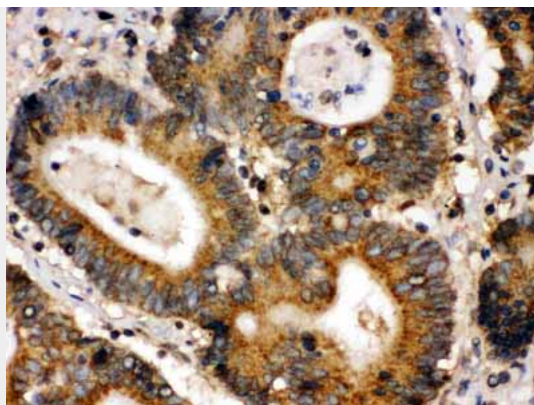
Anti-HSD11B1 antibody, ABO10696, Western blotting  
Lane 1: HELA Cell Lysate  
Lane 2: SMMC Cell Lysate  
Lane 3: RAJI Cell Lysate  
Lane 4: COLO320 Cell Lysate



Anti-HSD11B1 antibody, ABO10696, IHC(P)  
IHC(P): Mouse Intestine Tissue



Anti-HSD11B1 antibody, ABO10696, IHC(P)  
IHC(P): Rat Intestine Tissue



Anti-HSD11B1 antibody, ABO10696, IHC(P)IHC(P): Human Intestinal Cancer Tissue

#### **Anti-HSD11B1 Antibody - Background**

11beta-hydroxysteroid dehydrogenase type 1 is an NADPH-dependent enzyme highly expressed in key metabolic tissues including liver, adipose tissue, and the central nervous system. In these tissues, HSD11B1 reduces cortisone to the active hormone cortisol that activates glucocorticoid receptors. It is inhibited by carbenoxolone, a drug typically used in the treatment of peptic ulcers. Tannin et al.(1991) localized the HSD11B1 gene to chromosome 1. The localization was confirmed by isolating the gene from a chromosome 1-specific library using the cDNA as a probe. Schutte et al.(2000) mapped the HSD11B1 gene to 1q32-q41.