

Anti-HSD11B2 Antibody
Catalog # ABO12771**Specification****Anti-HSD11B2 Antibody - Product Information**

Application	WB, IHC
Primary Accession	P80365
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Corticosteroid 11-beta-dehydrogenase isozyme 2(HSD11B2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

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

Anti-HSD11B2 Antibody - Additional Information

Gene ID 3291

Other Names

Corticosteroid 11-beta-dehydrogenase isozyme 2, 1.1.1.-, 11-beta-hydroxysteroid dehydrogenase type 2, 11-DH2, 11-beta-HSD2, 11-beta-hydroxysteroid dehydrogenase type II, 11-HSD type II, 11-beta-HSD type II, NAD-dependent 11-beta-hydroxysteroid dehydrogenase, 11-beta-HSD, Short chain dehydrogenase/reductase family 9C member 3, HSD11B2, HSD11K {ECO:0000303|PubMed:8530071}, SDR9C3

Calculated MW

44127 MW KDa

Application Details

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

Subcellular Localization

Microsome . Endoplasmic reticulum .

Tissue Specificity

Expressed in kidney, pancreas, prostate, ovary, small intestine and colon. At midgestation, expressed at high levels in placenta and in fetal kidney and, at much lower levels, in fetal lung and testis (PubMed:8530071).

Protein Name

Corticosteroid 11-beta-dehydrogenase isozyme 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human HSD11B2 (277-309aa EKRRQLLLLANLPQELLQAYGKDYIEHLHGQFLH), different from the related mouse sequence by five amino acids, and from the related rat sequence by three 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-HSD11B2 Antibody - Protein Information

Name HSD11B2 ([HGNC:5209](#))

Function

Catalyzes the conversion of biologically active 11beta- hydroxyglucocorticoids (11beta-hydroxysteroid) such as cortisol, to inactive 11-ketoglucocorticoids (11-oxosteroid) such as cortisone, in the presence of NAD(+) (PubMed:10497248, PubMed:12788846, PubMed:17314322, PubMed:22796344, PubMed:27927697, PubMed:30902677, PubMed:33387577, PubMed:7859916, PubMed:8538347). Functions as a dehydrogenase (oxidase), thereby decreasing the concentration of active glucocorticoids, thus protecting the nonselective mineralocorticoid receptor from occupation by glucocorticoids (PubMed:10497248, PubMed:12788846, PubMed:17314322, PubMed:33387577, PubMed:7859916). Plays an important role in maintaining glucocorticoids balance during preimplantation and protects the fetus from excessive maternal corticosterone exposure (By similarity). Catalyzes the oxidation of 11beta-hydroxytestosterone (11beta,17beta-dihydroxyandrost-4-ene-3-one) to 11-ketotestosterone (17beta-hydroxyandrost-4-ene-3,11-dione), a major bioactive androgen (PubMed:22796344, PubMed:27927697). Catalyzes the conversion of 11beta-hydroxyandrostenedione (11beta-hydroxyandrost-4-ene-3,17-dione) to 11-ketoandrostenedione (androst-4-ene-3,11,17- trione), which can be further metabolized to 11-ketotestosterone (PubMed:27927697). Converts 7-beta-25-dihydroxycholesterol to 7-oxo-25- hydroxycholesterol in vitro (PubMed:30902677). 7-beta-25-dihydroxycholesterol (not 7-oxo-25-hydroxycholesterol) 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)

target="_blank">30902677). May protect ovulating oocytes and fertilizing spermatozoa from the adverse effects of cortisol (By similarity).

Cellular Location

Microsome. Endoplasmic reticulum

Tissue Location

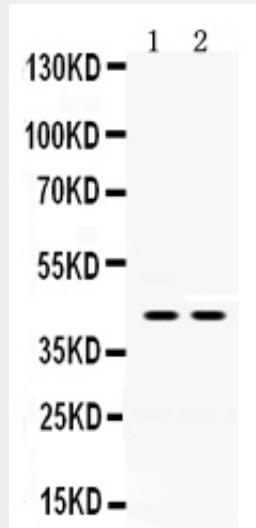
Expressed in kidney, placenta, pancreas, prostate, ovary, small intestine and colon, and in lower levels in the spleen and testis (PubMed:7859916). At midgestation, expressed at high levels in placenta and in fetal kidney and, at much lower levels, in fetal lung and testis (PubMed:8530071).

Anti-HSD11B2 Antibody - Protocols

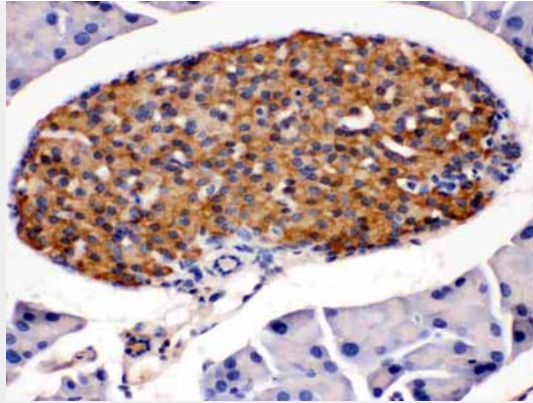
Provided below are standard protocols that you may find useful for product applications.

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

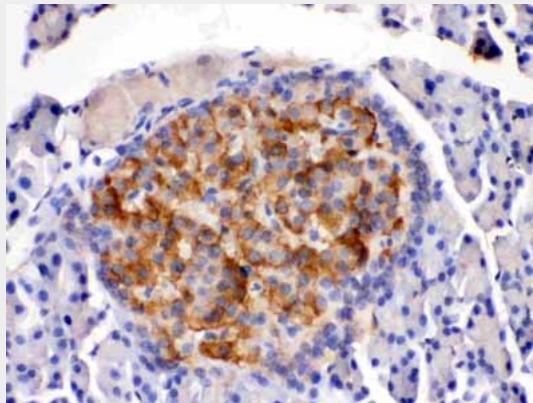
Anti-HSD11B2 Antibody - Images



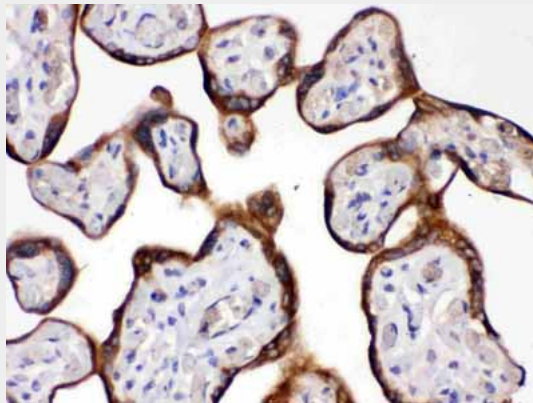
Anti- HSD11B2 antibody, ABO12771, Western blottingAll lanes: Anti HSD11B2 (ABO12771) at 0.5ug/mlLane 1: Rat Kidney Tissue Lysate at 50ugLane 2: Human Placenta Tissue Lysate at 50ugPredicted bind size: 44KDObserved bind size: 44KD



Anti- HSD11B2 antibody, ABO12771, IHC(P)IHC(P): Mouse Pancreas Tissue



Anti- HSD11B2 antibody, ABO12771, IHC(P)IHC(P): Rat Pancreas Tissue



Anti- HSD11B2 antibody, ABO12771, IHC(P)IHC(P): Human Placenta Tissue

Anti-HSD11B2 Antibody - Background

Corticosteroid 11- β -dehydrogenase isozyme 2, also known as 11- β -hydroxysteroid dehydrogenase 2, is an enzyme that in humans is encoded by the HSD11B2 gene. There are at least two isozymes of the corticosteroid 11-beta-dehydrogenase, a microsomal enzyme complex responsible for the interconversion of cortisol and cortisone. The type I isozyme has both 11-beta-dehydrogenase (cortisol to cortisone) and 11-oxoreductase (cortisone to cortisol) activities. The type II isozyme, encoded by this gene, has only 11-beta-dehydrogenase activity. In aldosterone-selective epithelial tissues such as the kidney, the type II isozyme catalyzes the glucocorticoid cortisol to the inactive metabolite cortisone, thus preventing illicit activation of the mineralocorticoid receptor. In tissues that do not express the mineralocorticoid receptor, such as the placenta and testis, it protects cells from the growth-inhibiting and/or pro-apoptotic effects of

cortisol, particularly during embryonic development. Mutations in this gene cause the syndrome of apparent mineralocorticoid excess and hypertension.