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HSD11B1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51753

Product Information

Application	WB
Primary Accession	P28845
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	32401

Additional Information

Gene ID	3290
Other Names	Corticosteroid 11-beta-dehydrogenase isozyme 1, 11-beta-hydroxysteroid dehydrogenase 1, 11-DH, 11-beta-HSD1, HSD11B1, HSD11, HSD11L
Target/Specificity	KLH conjugated synthetic peptide derived from human HSD11B1
Dilution	WB~~ 1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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:10497248, PubMed:12460758, PubMed:14973125, PubMed:15152005, PubMed:15280030, PubMed:17593962, PubMed:21453287, PubMed:27927697, PubMed:30902677). Participates in the corticosteroid receptor-mediated anti-inflammatory response, as well as metabolic and homeostatic processes (PubMed:10497248, PubMed:12414862, PubMed:15152005, PubMed:21453287). Plays a role in the secretion of aqueous humor in the eye, maintaining a normotensive, intraocular environment (PubMed:11481269). Bidirectional in vitro, predominantly functions as a reductase in vivo, thereby increasing the concentration of active glucocorticoids (PubMed:10497248, PubMed:11481269, PubMed:12414862, PubMed:12460758). 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 7beta-hydroxypregnenolone, 7-oxodehydroepiandrosterone (3beta-hydroxy-5-androstene-7,17-dione) and 7beta-hydroxydehydroepiandrosterone (3beta,7beta-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

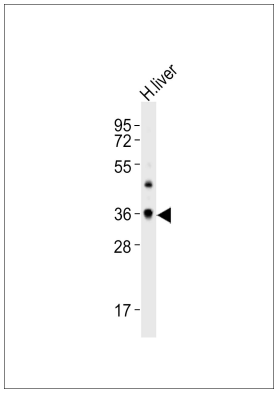
Catalyzes reversibly the conversion of cortisol to the inactive metabolite cortisone. Catalyzes reversibly the conversion of 7-ketocholesterol to 7-beta-hydroxycholesterol. In intact cells, the reaction runs only in one direction, from 7- ketocholesterol to 7-beta-hydroxycholesterol (By similarity).

References

Tannin G.M.,et al.J. Biol. Chem. 266:16653-16658(1991).
Draper N.,et al.J. Clin. Endocrinol. Metab. 87:4984-4990(2002).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Gregory S.G.,et al.Nature 441:315-321(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images

Anti-HSD11B1 Antibody at 1:1000 dilution + human liver lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 32 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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