For Research Use Only

HSD3B1 Polyclonal antibody, PBS Only

Catalog Number:32642-1-PBS

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Basic Information

Catalog Number:
32642-1-PBS

Size:
100ug , Concentration: 1 mg/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG38103

GenBank Accession Number:
BC031999

GeneID (NCBI):
3283

UNIPROT ID:
P14060

Full Name:
hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1

Calculated MW:
42 kDa

Observed MW:
42 kDa

Purification Method:
Antigen affinity Purification

Applications

Tested Applications:
WB, Indirect ELISA

Species Specificity:
human

Background Information

HSD3B1, also known as hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1, is an enzyme that plays a crucial role in steroid biosynthesis. It belongs to the short-chain dehydrogenase/reductase (SDR) family and is primarily involved in the conversion of C19 and C21 steroids with a 3β-hydroxy-5-ene structure to 3-oxo-4-ene products. This enzyme is mainly localized to the placenta and non-steroidogenic tissues. It is also involved in various biological processes, including C21-steroid hormone metabolic processes, hippocampus development, and response to corticosterone. HSD3B1 has been implicated in conditions such as hypertension and hypospadias. In addition, HSD3B1 has been studied in the context of prostate cancer, where it is involved in the synthesis of androgens within the tumor, contributing to resistance to radiotherapy and other treatments. Its expression and activity can be influenced by genetic variations, which may affect clinical outcomes in patients with prostate cancer. HSD3B1 is also involved in the metabolism of oxysterols, which are oxidized forms of cholesterol or its precursors. It catalyzes the oxidation of the 3β-hydroxy group to a 3-ketone and isomerizes the double bond from Δ5 to Δ4, a key reaction in bile acid biosynthesis. This enzyme's activity is essential for the conversion of initial 3β-hydroxy stereochemistry to the 3α-hydroxy stereochemistry in primary bile acids. HSD3B1 is also involved in the metabolism of side-chain oxysterols, which are ligands to various receptors and play roles in cholesterol biosynthesis and other biological processes. Overall, HSD3B1 is a multifunctional enzyme with significant roles in steroid hormone production, oxysterol metabolism, and various disease processes.

Storage

Storage:
Store at -80°C.
Storage Buffer:
PBS Only

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
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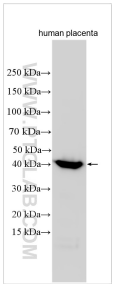
Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 32642-1-AP (HSD3B1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 32642-1-PBS in a different storage buffer formulation.