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SRD5A1 Rabbit pAb

Catalog # AP97302

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P18405
Other Accession	P18405
Reactivity	Mouse
Predicted	Rat, Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29459
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SRD5A1
Epitope Specificity	121-220/259
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the steroid 5-alpha reductase family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Steroid 5a-Reductase is an important enzyme in androgen physiology because it catalyzes the conversion of testosterone into the more potent 5a-dihydro-testosterone, which mediates androgen effects on target tissues. The enzyme exists as two isoforms: type 1, which is expressed mainly in the skin; and type 2, which is expressed mainly in the prostate. In cultured human skin cells, 5a-Reductase 1 shows heterogeneity of protein, and has different levels of transcriptional and translational expression. 5a-Reductase 1 is expressed in all portions of the hair follicle, whereas 5a-Reductase 2 is expressed only in mesenchymal portions. In addition, 5a-Reductase 1 is mainly expressed in human breast carcinoma and may play a role in the in situ production and actions of the potent androgen 5a-dihydrotestosterone, including inhibition of cancer cell proliferation in hormone-dependent human breast carcinoma. The 5a-Reductase-3a-hydroxysteroid dehydrogenase complex is present in the human brain, suggesting that the complex may be involved in the synthesis of neuroactive steroids or the catabolism of neurotoxic steroids.

Additional Information

Gene ID	6715
Other Names	S5AR 1; 0610031P22Rik; 4930435F02Rik; Srd5a-1; S5A1_BOVIN; SRD5A1; SR type 1; Steroid 5-alpha-reductase 1 (S5AR 1); 1.3.1.22; S5A1_HUMAN; S5A1_MOUSE; S5A1_RAT; steroid 5 alpha-reductase 1; steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1); 3-oxo-5-alpha-steroid 4-dehydrogenase 1

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SRD5A1 (HGNC:11284)
Function	Catalyzes the irreversible stereospecific reduction of the delta 4,5 bond (double bond between carbons 4 and 5) of various 3-oxo steroids (3-keto steroids) producing their 5alpha dihydro-3-oxo forms (PubMed:2339109, PubMed:23685396). Converts testosterone into 5-alpha- dihydrotestosterone (DHT), a more potent androgen as it is the preferred ligand for androgen receptor (AR) transactivation, making this reaction a key step in male sexual differentiation during development (PubMed:2339109, PubMed:23685396). Besides testosterone, it can also act on other steroids, including progesterone, androstenedione, and corticoids, producing metabolites with diverse roles (PubMed:2339109). Hence, it plays a central role in sexual differentiation and androgen physiology (PubMed:2339109).
Cellular Location	Microsome membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein
Tissue Location	Liver and prostate (at a low level).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.