

Steroid 5 Alpha Reductase 1 (SRD5a1) Active Protein | SRD5a1 active protein

Active Steroid 5 Alpha Reductase 1 (SRD5a1)

CATALOG # AAA161940	HOST E. coli	APPLICATIONS Activity Assay
-------------------------------	------------------------	---------------------------------------

PRODUCT SYNONYMS

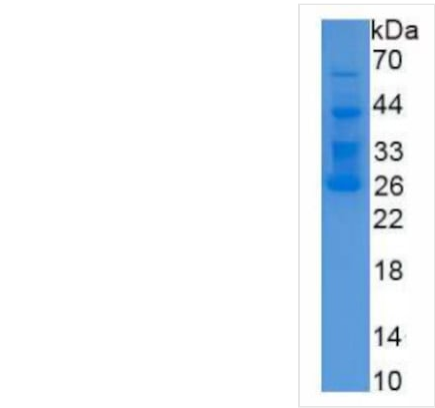
Steroid 5 Alpha Reductase 1 (SRD5a1); Active Steroid 5 Alpha Reductase 1 (SRD5a1); Steroid 5 Alpha Reductase 1; 3-Oxo-5 Alpha-Steroid Delta 4-Dehydrogenase Alpha 14; SRD5a1 active protein

PRODUCT SPECIFICATIONS

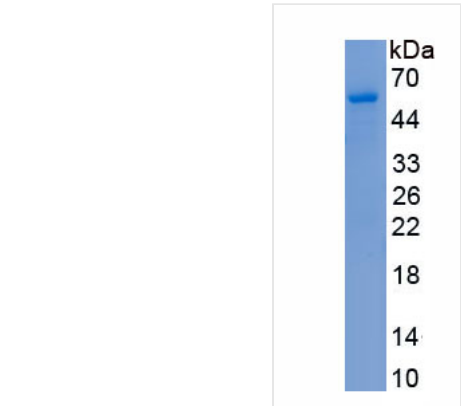
Host	E. coli
Purity/Purification	>80%
Form/Format	PBS, pH 7.4, containing 0.01% SKL, 5%Trehalose
Concentration	Original Concentration: 300 ug/mL (varies by lot)
Applicable Applications for SRD5a1 active protein	Activity Assay
Source	Prokaryotic expression
Residues	Met1~Leu255
Tags	N-terminal His and GST Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	8.7
Phenomenon explanation	The possible reasons that the actual band size differs from the predicted are as follows: 1. Splice variants: Alternative splicing may create different sized proteins from the same gene. 2. Relative charge: The composition of amino acids may affects the charge of the protein. 3. Post-translational modification: Phosphorylation, glycosylation, methylation etc. 4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form. 5. Polymerization of the target protein: Dimerization, multimerization etc.
Usage	Reconstitute in ddH2O to a concentration of 0.1-0.5 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Sequence

HELDCLLD ALVYLEGFLA FVAFVGLQW GSSVGRYSQ WGRVRPAPR AMFLQELPSM AMPLYECTRP AARLNLPM
RYLLAPMLN YQRTLVFPV LRGGRPTLL FTFVLAFLFC TLNGLQSRV LSGFNVAKD WTHPFLTG PALMLVQWJ
NIHSDIELRN LRKPGTQYK IPRGGLFEVY SSANYGELV ENCGFALSM SLQGVFALF TLCALETRAR QHKNYLEKF
EDYPKTRKIL IPFLL



SDS-PAGE



SDS-PAGE

Figure. SDS-PAGE

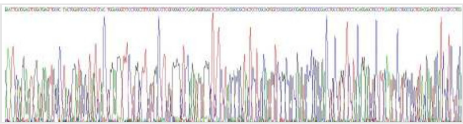
ADDITIONAL INFORMATION

Product Categories/Family for SRD5a1 active protein

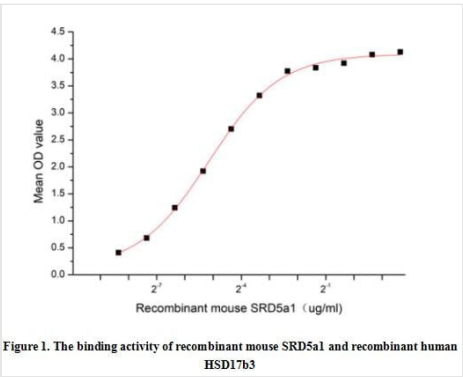
Active proteins

NCBI AND UNIPROT INFORMATION

NCBI GI # 87044895



Identification



Bioactivity

Steroid 5 Alpha Reductase 1 (SRD5a1) a member of the steroid 5alpha-reductase family (SRD5A1, SRD5A2 and SRD5A3) converting testosterone into 5-alpha-dihydrotestosterone and progesterone or corticosterone into their corresponding 5-alpha-3-oxosteroids. It plays a central role in sexual differentiation and androgen physiology. SRD5A1 was mainly expressed in the skin, scalp, liver, and brain tissues. Prostatic Adenoma and Prostatic Hyperplasia are associated with SRD5A1. Besides, 17-Beta-Hydroxysteroid Dehydrogenase Type 3 (HSD17b3) has been identified as an interactor of SRD5a1, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse SRD5a1 and recombinant human HSD17b3. Briefly, biotin-linked SRD5a1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to HSD17b3-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 ul stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant mouse SRD5a1 and recombinant human HSD17b3 was shown in Figure 1, the EC50 for this effect is 0.03 ug/mL.

NCBI GeneID	78925
NCBI Accession #	NP_780492.2
NCBI GenBank Nucleotide #	NM_175283.3
UniProt Accession #	Q68FF9; Q505K7
Molecular Weight	Accurate Molecular Mass: 57/40/35/28kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	3-oxo-5-alpha-steroid 4-dehydrogenase 1
NCBI Official Synonym Full Names	steroid 5 alpha-reductase 1
NCBI Official Symbol	Srd5a1
NCBI Official Synonym Symbols	S5AR 1; Srd5a-1; 0610031P22Rik; 4930435F02Rik
NCBI Protein Information	3-oxo-5-alpha-steroid 4-dehydrogenase 1
UniProt Protein Name	3-oxo-5-alpha-steroid 4-dehydrogenase 1
UniProt Gene Name	Srd5a1
UniProt Synonym Gene Names	S5AR 1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/steroid-5-alpha-reductase-1-srd5a1/161940>