Datasheet for ABIN3078959

HSD11B2 Protein (AA 1-405) (Strep Tag)

Go to Product page

Overview

Quantity:	250 µg
Target:	HSD11B2
Protein Characteristics:	AA 1-405
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HSD11B2 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	MERWPWPSGG AWLLVAARAL LQLLRSDLRL GRPLLAALAL LAALDWLCQR LLPPPAALAV LAAAGWIALS RLARPQRLPV ATRAVLITGC DSGFGKETAK KLDSMGFTVL ATVLELNSPG AIELRTCCSP RLRLLQMDLT KPGDISRVLE FTKAHTTSTG LWGLVNNAGH NEVVADAELS PVATFRSCME VNFFGALELT KGLLPLLRSS RGRIVTVGSP AGDMPYPCLG AYGTSKAAVA LLMDTFSCEL LPWGVKVSII QPGCFKTESV RNVGQWEKRK QLLLANLPQE LLQAYGKDYI EHLHGQFLHS LRLAMSDLTP VVDAITDALL AARPRRRYYP GQGLGLMYFI HYYLPEGLRR RFLQAFFISH CLPRALQPGQ PGTTPPQDAA QDPNLSPGPS PAVAR **Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits:

Product Details

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	HSD11B2

Target Details

Alternative Name:	HSD11B2 (HSD11B2 Products)
Background:	11-beta-hydroxysteroid dehydrogenase type 2 (11-DH2) (11-beta-HSD2) (EC 1.1.1.-) (11-beta-hydroxysteroid dehydrogenase type II) (11-HSD type II) (11-beta-HSD type II) (Corticosteroid 11-beta-dehydrogenase isozyme 2) (NAD-dependent 11-beta-hydroxysteroid dehydrogenase) (Short chain dehydrogenase/reductase family 9C member 3),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:7859916, PubMed:8538347, PubMed:10497248, PubMed:22796344, PubMed:27927697, PubMed:30902677, PubMed:33387577, PubMed:12788846, PubMed:17314322). Functions as a dehydrogenase (oxidase), thereby decreasing the concentration of active glucocorticoids, thus protecting the nonselective mineralocorticoid receptor from occupation by glucocorticoids (PubMed:7859916, PubMed:10497248, PubMed:33387577, PubMed:12788846, PubMed:17314322). 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). May protect ovulating oocytes and fertilizing spermatozoa from the adverse effects of cortisol (By similarity). {ECO:0000250|UniProtKB:O77667, ECO:0000250|UniProtKB:P51661, ECO:0000269|PubMed:10497248, ECO:0000269|PubMed:12788846, ECO:0000269|PubMed:17314322, ECO:0000269|PubMed:22796344, ECO:0000269|PubMed:27927697, ECO:0000269|PubMed:30902677, ECO:0000269|PubMed:33387577, ECO:0000269|PubMed:7859916, ECO:0000269|PubMed:8538347, ECO:0000303|PubMed:30902677}.
Molecular Weight:	44.1 kDa
UniProt:	P80365
Pathways:	Steroid Hormone Biosynthesis, Regulation of Systemic Arterial Blood Pressure by Hormones

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months