Datasheet for ABIN3078303

Aromatase Protein (AA 1-503) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	Aromatase (CYP19A1)
Protein Characteristics:	AA 1-503
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Aromatase protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MVLEMLNPIH YNITSIVPEA MPAATMPVLL LTGLFLLVWN YEGTSSIPGP GYCMGIGPLI SHGRFLWMGI GSACNYYNRV YGEFMRVWIS GEETLIISKS SSMFHIMKHN HYSSRFGSKL GLQCIGMHEK GIIFNNNPEL WKTTRPFFMK ALSGPGLVRM VTVCAESLKT HLDRLEEVTN ESGYVDVLTL LRRVMLDTSN TLFLRIPLDE SAIVVKIQGY FDAWQALLIK PDIFFKISWL YKKYEKSVKD LKDAIEVLIA EKRRRISTEE KLEECMDFAT ELILAEKRGD LTRENVNQCI LEMLIAAPDT MSVSLFFMLF LIAKHPNVEE AIIKEIQTVI GERDIKIDDI QKLKVMENFI YESMRYQPVV DLVMRKALED DVIDGYPVKK GTNIILNIGR MHRLEFFPKP NEFTLENFAK NVPYRYFQPF GFGPRGCAGK YIAMVMMKAI LVTLLRRFHV KTLQGQCVES IQKIHDLSLH PDETKNMLEM IFTPRNSDRC LEH **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.**

Product Details

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and

Product Details

	Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	Aromatase (CYP19A1)
Alternative Name:	CYP19A1 (CYP19A1 Products)
Background:	Aromatase (EC 1.14.14.14) (CYPXIX) (Cytochrome P-450AROM) (Cytochrome P450 19A1) (Estrogen synthase),FUNCTION: A cytochrome P450 monooxygenase that catalyzes the conversion of C19 androgens, androst-4-ene-3,17-dione (androstenedione) and testosterone to the C18 estrogens, estrone and estradiol, respectively (PubMed:27702664, PubMed:2848247). Catalyzes three successive oxidations of C19 androgens: two conventional oxidations at C19 yielding 19-hydroxy and 19-oxo/19-aldehyde derivatives, followed by a third oxidative aromatization step that involves C1-beta hydrogen abstraction combined with cleavage of the C10-C19 bond to yield a phenolic A ring and formic acid (PubMed:20385561). Alternatively, the third oxidative reaction yields a 19-norsteroid and formic acid. Converts dihydrotestosterone to delta1,10-dehydro 19-nordihydrotestosterone and may play a role in homeostasis of this potent androgen (PubMed:22773874). Also displays 2-hydroxylase activity toward estrone (PubMed:22773874). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR, NADPH-ferrihemoprotein reductase) (PubMed:20385561, PubMed:22773874). {ECO:0000269|PubMed:20385561, ECO:0000269|PubMed:22773874, ECO:0000269|PubMed:27702664, ECO:0000269|PubMed:2848247}.
Molecular Weight:	57.9 kDa
UniProt:	P11511
Pathways:	Metabolism of Steroid Hormones and Vitamin D, Steroid Hormone Biosynthesis, C21-Steroid Hormone Metabolic Process, Carbohydrate Homeostasis

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies

Application Details

	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. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process

