

Datasheet for ABIN3111471  
**COX1 Protein (AA 1-513) (Strep Tag)**[Go to Product page](#)

## 1 Image

## Overview

Quantity:	1 mg
Target:	COX1
Protein Characteristics:	AA 1-513
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This COX1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

## Product Details

Sequence: MFADRWLFST NHKDITLYL LFGAWAGVLG TALSLIRAE LGQPGNLLGN DHIYNVIVTA  
HAFVMIFFMV MPIMIGGFGN WLVPLMIGAP DMAFPRMNNM SFWLLPPSLL LLLASAMVEA  
GAGTGWTVYP PLAGNYSHPG ASVDLTIFSL HLAGVSSILG AINFITTIIN MKPPAMTQYQ  
TPLFVWSVLI TAVLLLLSLP VLAAGITMLL TDRNLNTTFF DPAGGGDPIL YQHLEWFFGH  
PEVYILILPG FGMISHIVTY YSGKKEPFGY MGMVWAMMSI GFLGFIVWAH HMFTVGMDVD  
TRAYFTSATM IIAIPTGVKV FSWLATLHGS NMKWSAAVLW ALGFIFLFTV GGLTGIVLAN  
SSLDIVLHDT YYVVAHFHYV LSMGAVFAIM GGFIHWFLP SGYTLDTQTYA KIHFTIMFIG  
VNLTFFPQHF LGLSGMPRRY SDYPDAYTTW NILSSVGSFI SLTAVMLMIF MIWEAFASKR  
KVLMEEPSM NLEWLYGCPP PYHTFEPPVY MKS

**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:

- 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.

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### 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:	COX1
Alternative Name:	MT-CO1 ( <a href="#">COX1 Products</a> )
Background:	<p>Cytochrome c oxidase subunit 1 (EC 7.1.1.9) (Cytochrome c oxidase polypeptide I),FUNCTION: Component of the cytochrome c oxidase, the last enzyme in the mitochondrial electron transport chain which drives oxidative phosphorylation. The respiratory chain contains 3 multisubunit complexes succinate dehydrogenase (complex II, CII), ubiquinol-cytochrome c oxidoreductase (cytochrome b-c1 complex, complex III, CIII) and cytochrome c oxidase (complex IV, CIV), that cooperate to transfer electrons derived from NADH and succinate to molecular oxygen, creating an electrochemical gradient over the inner membrane that drives transmembrane transport and the ATP synthase. Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Electrons originating from reduced cytochrome c in the intermembrane space (IMS) are transferred via the dinuclear copper A center (CU(A)) of subunit 2 and heme A of subunit 1 to the active site in subunit 1, a binuclear center (BNC) formed by heme A3 and copper B (CU(B)). The BNC reduces molecular oxygen to 2 water molecules using 4 electrons from cytochrome c in the IMS and 4 protons from the mitochondrial matrix. {ECO:0000250 UniProtKB:P00401}.</p>
Molecular Weight:	57.0 kDa
UniProt:	<a href="#">P00395</a>
Pathways:	<a href="#">Proton Transport</a>

## 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

## Application Details

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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)

## Images



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