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# CALCOCO1 Protein (AA 1-691) (Strep Tag)



#### Overview

Quantity:	1 mg
Target:	CALCOCO1
Protein Characteristics:	AA 1-691
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CALCOCO1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

#### **Product Details**

Sequence:

MEESPLSRAP SRGGVNFLNV ARTYIPNTKV ECHYTLPPGT MPSASDWIGI FKVEAACVRD YHTFVWSSVP ESTTDGSPIH TSVQFQASYL PKPGAQLYQF RYVNRQGQVC GQSPPFQFRE PRPMDELVTL EEADGGSDIL LVVPKATVLQ NQLDESQQER NDLMQLKLQL EGQVTELRSR VQELERALAT ARQEHTELME QYKGISRSHG EITEERDILS RQQGDHVARI LELEDDIQTI SEKVLTKEVE LDRLRDTVKA LTREQEKLLG QLKEVQADKE QSEAELQVAQ QENHHLNLDL KEAKSWQEEQ SAQAQRLKDK VAQMKDTLGQ AQQRVAELEP LKEQLRGAQE LAASSQQKAT LLGEELASAA AARDRTIAEL HRSRLEVAEV NGRLAELGLH LKEEKCQWSK ERAGLLQSVE AEKDKILKLS AEILRLEKAV QEERTQNQVF KTELAREKDS SLVQLSESKR ELTELRSALR VLQKEKEQLQ EEKQELLEYM RKLEARLEKV ADEKWNEDAT TEDEEAAVGL SCPAALTDSE DESPEDMRLP PYGLCERGDP GSSPAGPREA SPLVVISQPA PISPHLSGPA EDSSSDSEAE DEKSVLMAAV QSGGEEANLL LPELGSAFYD MASGFTVGTL SETSTGGPAT PTWKECPICK ERFPAESDKD ALEDHMDGHF FFSTQDPFTF E

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 posttranslational 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.
- 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 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)

## **Target Details**

Target: CALCOCO1

Alternative Name: CALCOCO1 (CALCOCO1 Products)

Background:

Calcium-binding and coiled-coil domain-containing protein 1 (Calphoglin) (Coiled-coil coactivator protein) (Sarcoma antigen NY-SAR-3), FUNCTION: Functions as a coactivator for aryl hydrocarbon and nuclear receptors (NR). Recruited to promoters through its contact with the N-terminal basic helix-loop-helix-Per-Arnt-Sim (PAS) domain of transcription factors or coactivators, such as NCOA2. During ER-activation acts synergistically in combination with other NCOA2-binding proteins, such as EP300, CREBBP and CARM1. Involved in the transcriptional activation of target genes in the Wnt/CTNNB1 pathway. Functions as a secondary coactivator in LEF1-mediated transcriptional activation via its interaction with CTNNB1. Coactivator function for nuclear receptors and LEF1/CTNNB1 involves differential utilization of two different activation regions (By similarity). In association with CCAR1 enhances GATA1- and MED1-mediated transcriptional activation from the gamma-globin promoter during erythroid differentiation of K562 erythroleukemia cells (PubMed:24245781). {ECO:0000250|UniProtKB:Q8CGU1, ECO:0000269|PubMed:24245781}., FUNCTION: Seems to enhance inorganic pyrophosphatase thus activating phosphogluomutase (PMG). Probably functions as a component of the calphoglin complex, which is involved in linking cellular metabolism (phosphate and glucose metabolism) with other core functions including protein synthesis and degradation, calcium signaling and cell growth. {ECO:0000269|Ref.1}.

Molecular Weight:

77.3 kDa

UniProt:

09P1Z2

Pathways:

Intracellular Steroid Hormone Receptor Signaling Pathway, Chromatin Binding

## **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. 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)