

Datasheet for ABIN3104277

## Mucolin 3 Protein (Mcoln3) (AA 1-553) (Strep Tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	Mucolin 3 (Mcoln3)
Protein Characteristics:	AA 1-553
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Mucolin 3 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### Product Details

Sequence: MADPEVVVSS CSSHEEENRC NFNQQTSPSE ELLLEDQMRR KLKFFFMNPC EKFWARGRKP  
WKLAIQILKI AMVTIQLVLF GLSNQMVAVF KEENTIAFKH LFLKGYMDRM DDTYAVYTQS  
DVYDQLIFAV NQYLQLYNVS VGNHAYENKG TKQSAMAICQ HFYKRGNIYP GNDFDIDPE  
IETECFFVEP DEPFHIGTPA ENKLNLTLDL HRLLTVELQF KLKAINLQTV RHQELPDCYD  
FTLTITFDNK AHSGRKISL DNDISIRECK DWHVSGSIQK NTHYMMIFDA FVILTCLVSL  
ILCIRSVIRG LQLQQEFVNF FLLHYKKEVS VSDQMEFVNG WYIMIIISDI LTIIGSILKM EIQAQSLTSY  
DVCSILLGTS TMLVWLG VIR YLGFFAKYNL LILTLQAALP NVIRFCCCAA MIYLG YCF CG  
WIVLGPYHDK FRSLNMVSEC LFSLINGDDM FATFAKMQQK SYLVWLFSRI YLYSFISLFI  
YMILSLFIAL ITDTYETIKQ YQDGFPE TE LRTFISECKD LPNSGKYRLE DDPPVSLFCC CKK

**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

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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

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Target: Mucolipin 3 (Mcoln3)

Alternative Name: MCOLN3 ([Mcoln3 Products](#))

Background: Mucolipin-3 (Transient receptor potential channel mucolipin 3) (TRPML3),FUNCTION: Nonselective ligand-gated cation channel probably playing a role in the regulation of membrane trafficking events. Acts as a Ca(2+)-permeable cation channel with inwardly rectifying activity (PubMed:18369318, PubMed:19497048, PubMed:19522758, PubMed:19885840, PubMed:29106414). Mediates release of Ca(2+) from endosomes to the cytoplasm, contributes to endosomal acidification and is involved in the regulation of membrane trafficking and fusion in the endosomal pathway (PubMed:21245134). Does not seem to act as mechanosensory transduction channel in inner ear sensory hair cells. Proposed to play a critical role at the cochlear stereocilia ankle-link region during hair-bundle growth (By similarity). Involved in the regulation of autophagy (PubMed:19522758). Through association with GABARAPL2 may be involved in autophagosome formation possibly providing Ca(2+) for the fusion process (By similarity). Through a possible and probably tissue-specific heteromerization with MCOLN1 may be at least in part involved in many lysosome-dependent cellular events (PubMed:19885840). Possible heteromeric ion channel assemblies with TRPV5 show pharmacological similarity with TRPML3 (PubMed:23469151).  
{ECO:0000250|UniProtKB:Q8R4F0, ECO:0000269|PubMed:18369318, ECO:0000269|PubMed:19497048, ECO:0000269|PubMed:19522758, ECO:0000269|PubMed:19885840, ECO:0000269|PubMed:20378547, ECO:0000269|PubMed:21245134, ECO:0000269|PubMed:23469151, ECO:0000269|PubMed:29106414, ECO:0000305}.

Molecular Weight: 64.2 kDa

UniProt: [Q8TDD5](#)

Pathways: [Sensory Perception of Sound](#)

## Application Details

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**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.

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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**Buffer:** The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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**Handling Advice:** Avoid repeated freeze-thaw cycles.

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**Storage:** -80 °C

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**Storage Comment:** Store at -80°C.

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**Expiry Date:** Unlimited (if stored properly)

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