

Datasheet for ABIN3115541  
ANO1 Protein (AA 1-986) (Strep Tag)

1 Image



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Overview

Quantity:	1 mg
Target:	ANO1
Protein Characteristics:	AA 1-986
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ANO1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MRVNEKYSTL PAEDRSVHII NICAIEDIGY LPSEGTLLNS LSVDPDAECK YGLYFRDGRR KVDYILVYHH KRPSGNRTL VRRVQHSDTPS GARSVKQDHP LPGKGASLDA GSGEPPMDYH EDDKRFRREE YEGNLL EAGL ELERDEDTKI HGVGVFKIHA PWNVLCREAE FLKCLKMPTKK MYHINETRGL LKKINSVLQK ITDPIQPKVA EHRPQTMKRL SYPFSREKQH LFDLSKD KDSF FDSKTRSTIV YEILKRTTCT KAKYSMGITS LLANGVYAAA YPLHDGDYNG ENVEFNDRKL LYEEWARYGV FYKYQPIDL V RKYFGEKIGL YFAWLG VYTQ MLIPASIVGI IVFLYGCATM DENIPSMEMC DQRHNITMCP LCDKTC SYWK MSSACATARA SHLFDNPATV FFSVFMALWA ATFMEHWKRK QMRLNYRWDL TGFE EEEEEAV KDHPRAEYEA RVLEKSLKKE SRNKEKRRHI PEESTNKWKQ RVKTAMAGVK LTDKVKL TWR DRFPAYLTNL VSIIFMIAVT FAIVLGVIIY RISMAAALAM NSSPSVRSNI RVTVTATAVI INLVWILLD EVYGC IARWL TKIEVPKTEK SFEERLIFKA FLLKFVNSYT PIFYVAFFKG RFVGRPGDYV YIFRSFRMEE CAPGGCLMEL CIQLSIIMLG KQLIQNNLFE IGIPKMKKLI RYLKLKQQSP PDHEECVKRK QRYEVDYNLE
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PFAGLTPEYM EMIIQGFVLT LFVASFPLAP LFALLNNIIE IRLDAKKFVT ELRRPVAVRA  
KDIGIWYNIL RGIGKLAVII NAFVISFTSD FIPRLVLYM YSKNGTMHGF VNHTLSSFNV  
SDFQNGTAPN DPLDLGYEVQ ICRYKDYREP PWSENKYDIS KDFWAVLAAR LAFVIVFQNL  
VMFMSEFVDW VIPDIPKDIS QQIHKEKVLM VELFMREEQD KQQLLETWME KERQKDEPPC  
NHHNTKACPD SLGSPAPSHA YHGGVL

**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.**

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### 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

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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 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:	ANO1
Alternative Name:	ANO1 ( <a href="#">ANO1 Products</a> )
Background:	Anoctamin-1 (Discovered on gastrointestinal stromal tumors protein 1) (Oral cancer overexpressed protein 2) (Transmembrane protein 16A) (Tumor-amplified and overexpressed sequence 2),FUNCTION: Calcium-activated chloride channel (CaCC) (PubMed:20056604, PubMed:22178883, PubMed:22946059, PubMed:32487539). Plays a role in transepithelial anion transport and smooth muscle contraction. Required for the normal functioning of the interstitial cells of Cajal (ICCs) which generate electrical pacemaker activity in gastrointestinal smooth muscles. Acts as a major contributor to basal and stimulated chloride conductance in airway epithelial cells and plays an important role in tracheal cartilage development. Required for CFTR activation by enhancing endoplasmic reticulum Ca(2+) store release and is also required for CFTR membrane expression (PubMed:28963502). Required for basal and ATP-dependent mucus secretion in airways and intestine, probably by controlling exocytosis of mucus-filled granules by providing Ca(2+) to an apical signaling compartment (By similarity). Contributes to airway mucus expression induced by interleukins IL3 and IL8 and by the asthma-associated protein CLCA1 and is required for expression of mucin MUC5AC (PubMed:33026825). However, was shown in another study not to be required for MUC5AC expression (PubMed:31732694). Plays a role in the propagation of Ca(2+) waves in Kolliker's

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organ in the cochlea and contributes to the refinement of auditory brainstem circuitries prior to hearing onset (By similarity). In vomeronasal sensory neurons, modulates spontaneous firing patterns in the absence of stimuli as well as the firing pattern of pheromone-evoked activity (By similarity). Responsible for calcium-activated chloride channel activity in type I taste cells of the vallate papillae (By similarity). Acts as a heat sensor in nociceptive neurons (By similarity). In dorsal root ganglion neurons, plays a role in mediating non-histaminergic Mas-related G-protein coupled receptor (MRGPR)-dependent itching, acting as a downstream effector of MRGPRs (By similarity). In the developing brain, required for the Ca(2+)-dependent process extension of radial glial cells (By similarity). {ECO:0000250|UniProtKB:Q8BHY3, ECO:0000269|PubMed:20056604, ECO:0000269|PubMed:22178883, ECO:0000269|PubMed:22946059, ECO:0000269|PubMed:28963502, ECO:0000269|PubMed:31732694, ECO:0000269|PubMed:32487539, ECO:0000269|PubMed:33026825}., FUNCTION: [Isoform 4]: Calcium-activated chloride channel (CaCC). Contributes to calcium-activated chloride secretion in human sweat gland epithelial cells. Shows increased basal chloride permeability and decreased Ca(2+)-induced chloride permeability. {ECO:0000269|PubMed:25220078}., FUNCTION: [Isoform 5]: Calcium-activated chloride channel (CaCC). Shows increased sensitivity to intracellular Ca(2+). {ECO:0000269|PubMed:26359375}.

Molecular Weight:	114.1 kDa
UniProt:	<a href="#">Q5XXA6</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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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</p>

## Application Details

	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)

## Images



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