

Datasheet for ABIN3115996

Otopetrin 1 Protein (OTOP1) (AA 1-612) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	Otopetrin 1 (OTOP1)
Protein Characteristics:	AA 1-612
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Otopetrin 1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MLEGLGSPAS PRAAASASVA GSSGPAACSP PSSSAPRSPE SPAPRRGGVR ASVPQKLAEM LSSQYGLIVF VAGLLLLLLAW AVHAAGVSKS DLLCFLTALM LLQLLWMLWY VGRSSAHRRL FRLKDTHAGA GWLRGSITLF AVITVILGCL KIGYFIGFSE CLSATEGVFP VTHSVHTLLQ VYFLWGHAKD IIQSFKTLER FGVIHSVFTN LLLWANGVLN ESKHQLNEHK ERLITLGFGN ITTVLDDHTP QCNCTPPTLC TAISHGIYYL YPFNIEYQIL ASTMLYVLWK NIGRKVD SHQ HQKMQFKSDG VMVGAVLGLT VLAATIAVVV VYLIHIGRSK TKSESALIMF YLYAITLLML MGAAGLAGIR IYRIDEKSLD ESKNPARKLD SDLLVG TASG SWLISWGSIL AILCAEGHPR YTWYNLPYSI LAIVEKYIQN LFIFESIHRE PEKLSEDIQT LRVVTV CNGN TMPLASSCPK SGGVARDVAP QGKDMPPAAN GNVCMRESHD KEEKQEESS WGGSPSPVRL PRFLQGNAKR KVLRNIAAFL FLCNISLWIP PAFGCRPEYD NGL EEIVFGF EPWII VVNL A MPFSIFYRMH AAASLFEVYC KI
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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.

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

Product Details

- 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:	Otopetrin 1 (OTOP1)
Alternative Name:	OTOP1 (OTOP1 Products)
Background:	Proton channel OTOP1 (Otopetrin-1) (hOtop1),FUNCTION: Proton-selective channel that specifically transports protons into cells (PubMed:29371428). Proton channel activity is only weakly-sensitive to voltage (By similarity). Proton-selective channel activity is probably required in cell types that use changes in intracellular pH for cell signaling or to regulate biochemical or developmental processes (PubMed:29371428). In the vestibular system of the inner ear, required for the formation and function of otoconia, which are calcium carbonate crystals that sense gravity and acceleration (By similarity). Probably acts by maintaining the pH appropriate for formation of otoconia (By similarity). Regulates purinergic control of intracellular calcium in vestibular supporting cells (By similarity). May be involved in sour taste perception in sour taste cells by mediating entry of protons within the cytosol (By similarity). Also involved in energy metabolism, by reducing adipose tissue inflammation and protecting from obesity-induced metabolic dysfunction (By similarity). {ECO:0000250 UniProtKB:Q80VM9, ECO:0000269 PubMed:29371428}.
Molecular Weight:	67.4 kDa
UniProt:	Q7RTM1

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

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.

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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