Datasheet for ABIN3093900

MITF Protein (AA 1-526) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	MITF
Protein Characteristics:	AA 1-526
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MITF protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MQSESGIVPD FEVGEEFHEE PKTYYELKSQ PLKSSSSAEH PGASKPPISS SSMTSRILLR QQLMREQMQE QERREQQQKL QAAQFMQQRV PVSQTPAINV SVPTTLPSAT QVPMEVLKVQ THLENPTKYH IQQAQRQQVK QYLSTTLANK HANQVLSLPC PNQPGDHVMP PVPGSSAPNS PMAMLTLNSN CEKEGFYKFE EQNRAESECP GMNTHSRASC MQMDDVIDDI ISLESSYNEE ILGLMDPALQ MANTLPVSGN LIDLYGNQGL PPPGLTISNS CPANLPNIKR ELTACIFPTE SEARALAKER QKKDNHNLIE RRRRFNINDR IKELGTLIPK SNDPDMRWNK GTILKASVDY IRKLQREQQR AKELENRQKK LEHANRHLLL RIQELEMQAR AHGLSLIPST GLCSPDLVNR IIKQEPVLEN CSQDLLQHHA DLTCTTTLDL TDGTITFNNN LGTGTEANQA YSVPTKMGSK LEDILMDDTL SPVGVTDPLL SSVSPGASKT SSRRSSMSME ETEHTC **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.**

Product Details

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 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)

Target Details

Target:	MITF
Alternative Name:	MITF (MITF Products)
Background:	Microphthalmia-associated transcription factor (Class E basic helix-loop-helix protein 32) (bHLHe32),FUNCTION: Transcription factor that acts as a master regulator of melanocyte survival and differentiation as well as melanosome biogenesis (PubMed:10587587, PubMed:22647378, PubMed:27889061, PubMed:9647758). Binds to M-boxes (5'-TCATGTG-3') and symmetrical DNA sequences (E-boxes) (5'-CACGTG-3') found in the promoter of pigmentation genes, such as tyrosinase (TYR) (PubMed:10587587, PubMed:22647378, PubMed:27889061, PubMed:9647758). Involved in the cellular response to amino acid availability by acting downstream of MTOR: in the presence of nutrients, MITF phosphorylation by MTOR promotes its inactivation (PubMed:36608670). Upon starvation or lysosomal stress, inhibition of MTOR induces MITF dephosphorylation, resulting in transcription factor activity (PubMed:36608670). Plays an important role in melanocyte development by regulating the expression of tyrosinase (TYR) and tyrosinase-related protein 1 (TYRP1) (PubMed:10587587, PubMed:22647378, PubMed:27889061, PubMed:9647758). Plays a critical role in the differentiation of various cell types, such as neural crest-derived melanocytes, mast cells, osteoclasts and optic cup-derived retinal pigment epithelium (PubMed:10587587, PubMed:22647378, PubMed:27889061, PubMed:9647758). {ECO:0000269|PubMed:10587587, ECO:0000269|PubMed:22647378, ECO:0000269|PubMed:27889061, ECO:0000269|PubMed:36608670, ECO:0000269|PubMed:9647758}.
Molecular Weight:	58.8 kDa
UniProt:	O75030
Pathways:	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

Application Details

	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)

