Datasheet for ABIN3099550

FUT7 Protein (AA 1-342) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	FUT7
Protein Characteristics:	AA 1-342
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This FUT7 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MNNAGHGPTR RLRGLGVLAG VALLAALWLL WLLGSAPRGT PAPQPTITIL VWHWPFTDQP PELPSDTCTR YGIARCHLSA NRSLLASADA VVFHHRELQT RRSHLPLAQR PRGQPWVWAS MESPSHTHGL SHLRGIFNWV LSYRRDSDIF VPYGRLEPHW GPSPPLPAKS RVAAWVVSNF QERQLRARLY RQLAPHLRVD VFGRANGRPL CASCLVPTVA QYRFYLSFEN SQHRDYITEK FWRNALVAGT VPVVLGPPRA TYEAFVPADA FVHVDDFGSA RELAAFLTGM NESRYQRFFA WRDRLRVRLF TDWRERFCAI CDRYPHLPRS QVYEDLEGWF QA

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 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.

Product Details

Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	FUT7
Alternative Name:	FUT7 (FUT7 Products)
Background:	Alpha-(1,3)-fucosyltransferase 7 (EC 2.4.1.-) (Fucosyltransferase 7) (Fucosyltransferase VII) (Fuc-TVII) (FucT-VII) (Galactoside 3-L-fucosyltransferase) (Selectin ligand synthase),FUNCTION: Catalyzes the transfer of L-fucose, from a guanosine diphosphate-beta-L-fucose, to the N-acetyl glucosamine (GlcNAc) of a distal alpha2,3 sialylated lactosamine unit of a glycoprotein or a glycolipid-linked sialopolylactosamines chain through an alpha-1,3 glycosidic linkage and participates in the final fucosylation step in the biosynthesis of the sialyl Lewis X (sLe(x)), a carbohydrate involved in cell and matrix adhesion during leukocyte trafficking and fertilization (PubMed:8207002, PubMed:8752218, PubMed:8666674, PubMed:9299472, PubMed:9405391, PubMed:9473504, PubMed:9499379, PubMed:9461592, PubMed:15632313, PubMed:15926890, PubMed:18553500, PubMed:18402946, PubMed:11404359, PubMed:29593094). In vitro, also synthesizes sialyl-dimeric-Lex structures, from VIM-2 structures and both di-fucosylated and trifucosylated structures from mono-fucosylated precursors (PubMed:9499379). However does not catalyze alpha 1-3 fucosylation when an internal alpha 1-3 fucosylation is present in polylactosamine chain and the fucosylation rate of the internal GlcNAc residues is reduced once fucose has been added to the distal GlcNAc (PubMed:9473504, PubMed:9499379). Also catalyzes the transfer of a fucose from GDP-beta-fucose to the 6-sulfated a(2,3)sialylated substrate to produce 6-sulfo sLex mediating significant L-selectin-dependent cell adhesion (PubMed:10200296, PubMed:8752218). Through sialyl-Lewis(x) biosynthesis, can control SELE- and SELP-mediated cell adhesion with leukocytes and allows leukocytes tethering and rolling along the endothelial tissue thereby enabling the leukocytes to accumulate at a site of inflammation (PubMed:10386892, PubMed:29138114, PubMed:8666674, PubMed:9473504, PubMed:9834120). May enhance embryo implantation through sialyl Lewis X (sLeX)-mediated adhesion of embryo cells to endometrium (PubMed:18402946, PubMed:18553500). May affect insulin signaling by up-regulating the phosphorylation and expression of some signaling molecules involved in the insulin-signaling pathway through SLe(x) which is present on the glycans of the INSRR alpha subunit (PubMed:17229154). {ECO:0000269|PubMed:10200296, ECO:0000269|PubMed:10386892, ECO:0000269|PubMed:11404359, ECO:0000269|PubMed:15632313,

Target Details

	ECO:0000269|PubMed:15926890, ECO:0000269|PubMed:17229154, ECO:0000269|PubMed:18402946, ECO:0000269|PubMed:18553500, ECO:0000269|PubMed:29138114, ECO:0000269|PubMed:8207002, ECO:0000269|PubMed:8666674, ECO:0000269|PubMed:8752218, ECO:0000269|PubMed:9299472, ECO:0000269|PubMed:9405391, ECO:0000269|PubMed:9461592, ECO:0000269|PubMed:9473504, ECO:0000269|PubMed:9499379, ECO:0000269|PubMed:9834120}.
Molecular Weight:	39.2 kDa
UniProt:	Q11130

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

Handling

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