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# Datasheet for ABIN3092691 FOXA2 Protein (AA 1-457) (Strep Tag)





### Overview

Quantity:	1 mg
Target:	FOXA2
Protein Characteristics:	AA 1-457
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXA2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

### Product Details

Characteristics	Key Panafita:
	have a special request, please contact us.
	system, a different complexity of the protein could make another tag necessary. In case you
	Sequence without tag. The proposed Strep-Tag is based on experience s with the expression
	SLAMGPVTNK TGLDASPLAA DTSYYQGVYS RPIMNSS
	EAHLKPEHHY AFNHPFSINN LMSSEQQHHH SHHHHQPHKM DLKAYEQVMH YPGYGSPMPG
	TESPHSSASP CQEHKRGGLG ELKGTPAAAL SPPEPAPSPG QQQQAAAHLL GPPHHPGLPP
	NMFENGCYLR RQKRFKCEKQ LALKEAAGAA GSGKKAAAGA QASQAQLGEA AGPASETPAG
	TLSEIYQWIM DLFPFYRQNQ QRWQNSIRHS LSFNDCFLKV PRSPDKPGKG SFWTLHPDSG
	MGGLAPYANM NSMSPMYGQA GLSRARDPKT YRRSYTHAKP PYSYISLITM AIQQSPNKML
	GSMNMSSYVG AGMSPSLAGM SPGAGAMAGM GGSAGAAGVA GMGPHLSPSL SPLGGQAAGA
Sequence:	MLGAVKMEGH EPSDWSSYYA EPEGYSSVSN MNAGLGMNGM NTYMSMSAAA MGSGSGNMSA

Characteristics:

Key Benefits:

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- · 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 posttranslational 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.
- 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.

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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:	FOXA2
Alternative Name:	FOXA2 (FOXA2 Products)
Background:	Hepatocyte nuclear factor 3-beta (HNF-3-beta) (HNF-3B) (Forkhead box protein A2)
	(Transcription factor 3B) (TCF-3B),FUNCTION: Transcription factor that is involved in
	embryonic development, establishment of tissue-specific gene expression and regulation of
	gene expression in differentiated tissues. Is thought to act as a 'pioneer' factor opening the
	compacted chromatin for other proteins through interactions with nucleosomal core histones
	and thereby replacing linker histones at target enhancer and/or promoter sites. Binds DNA with
	the consensus sequence 5'-[AC]A[AT]T[AG]TT[GT][AG][CT]T[CT]-3' (By similarity). In embryonic
	development is required for notochord formation. Involved in the development of multiple
	endoderm-derived organ systems such as the liver, pancreas and lungs, FOXA1 and FOXA2
	seem to have at least in part redundant roles. Originally described as a transcription activator
	for a number of liver genes such as AFP, albumin, tyrosine aminotransferase, PEPCK, etc.
	Interacts with the cis-acting regulatory regions of these genes. Involved in glucose
	homeostasis, regulates the expression of genes important for glucose sensing in pancreatic
	beta-cells and glucose homeostasis. Involved in regulation of fat metabolism. Binds to
	fibrinogen beta promoter and is involved in IL6-induced fibrinogen beta transcriptional
	activation. {ECO:0000250}.
Molecular Weight:	48.3 kDa
UniProt:	Q9Y261
Pathways:	Dopaminergic Neurogenesis, Regulation of Carbohydrate Metabolic Process
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
	as ment no the protein has not been tested for functional studies yet we called one a
	guarantee though.

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# Application Details

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something that functions like a cell, but without the constraints of a living system - all that's
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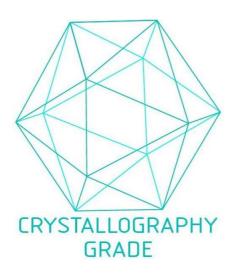
Restrictions:

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

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