

Datasheet for ABIN3133874

FOXA2 Protein (AA 1-459) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	FOXA2
Protein Characteristics:	AA 1-459
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXA2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	<p>MLGAVKMEGH EPSDWSSYYA EPEGYSSVSN MNAGLGMNGM NTYMSMSAAA MGGGSGNMSA GSMNMSSYVG AGMSPSLAGM SPGAGAMAGM SGSAGAAGVA GMGPHLSPSL SPLGGQAAGA MGGLAPYANM NSMSPMYGQA GLSRARDPKT YRRSYTHAKP PYSYISLITM AIQQSPNKML TLSEIQWIM DLFPFYRQNN QRWQNSIRHS LSFNDCFLKV PRSPDKPGKG SFWTLHPDSG NMFENGCYLR RQKRFKCEKQ LALKEAAGAA SSGGKKTAPG SQASQAQLGE AAGSASETPA GTESPHSSAS PCQEHKRGGL SELKGAPASA LSPPEPAPSP GQQQQAHAHL LGPPHHPGLP PEAHLKPEHH YAFNHPFSIN NLMSSEQQHH HSHHHHQPHK MDLKAYEQVM HYPGGYGSPM PGSLAMGPVT NKAGLDASPL AADTSYYQGV YSRPIMNSS</p>

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

Purity:

> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade:

custom-made

Target Details

Target:	FOXA2
Alternative Name:	Foxa2 (FOXA2 Products)
Background:	<p>Hepatocyte nuclear factor 3-beta (HNF-3-beta) (HNF-3B) (Forkhead box protein A2),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. FOXA1 and FOXA2 are essential for hepatic specification. FOXA1 and FOXA2 are required for morphogenesis and cell differentiation during formation of the lung. FOXA1 and FOXA2 are involved in bile duct formation, they positively regulate the binding glucocorticoid receptor/NR3C1 to the IL6 promoter. FOXA1 and FOXA2 regulate multiple phases of midbrain dopaminergic neuron development, they regulate expression of NEUROG2 at the beginning of mDA neurogenesis and of NR4A2 and EN1 in immature mDA neurons. Modulates the transcriptional activity of nuclear hormone receptors, inhibits AR-mediated transcription from the LCN5 promoter. Binds to fibrinogen beta promoter and is involved in IL6-induced fibrinogen beta transcriptional activation. 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. In pancreatic beta cells activates transcription of potassium channel subunits KCNJ11 and ABCC8. Involved in regulation of fat metabolism, activates transcriptional programs of lipid metabolism and ketogenesis at low insulin state. Involved in transcriptional regulation of MUC2 in the intestine. {ECO:0000250, ECO:0000269 PubMed:11445544, ECO:0000269 PubMed:11875061, ECO:0000269 PubMed:15616563, ECO:0000269 PubMed:15668254, ECO:0000269 PubMed:15959514, ECO:0000269 PubMed:16740652, ECO:0000269 PubMed:17596284, ECO:0000269 PubMed:18336786, ECO:0000269 PubMed:19141476, ECO:0000269 PubMed:19436110, ECO:0000269 PubMed:8069909}.</p>
Molecular Weight:	48.5 kDa
UniProt:	P35583

Target Details

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 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.

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Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months