Datasheet for ABIN3133874

FOXA2 Protein (AA 1-459) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	FOXA2
Protein Characteristics:	AA 1-459
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXA2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MLGAVKMEGH EPSDWSSYYA EPEGYSSVSN MNAGLGMNGM NTYMSMSAAA MGGGSGNMSA GSMNMSSYVG AGMSPSLAGM SPGAGAMAGM SGSAGAAGVA GMGPHLSPSL SPLGGQAAGA MGGLAPYANM NSMSPMYGQA GLSRARDPKT YRRSYTHAKP PYSYISLITM AIQQSPNKML TLSEIYQWIM DLFPFYRQNQ QRWQNSIRHS LSFNDCFLKV PRSPDKPGKG SFWTLHPDSG NMFENGCYLR RQKRFKCEKQ LALKEAAGAA SSGGKKTAPG SQASQAQLGE AAGSASETPA GTESPHSSAS PCQEHKRGGL SELKGAPASA LSPPEPAPSP GQQQQAAAHL LGPPHHPGLP PEAHLKPEHH YAFNHPFSIN NLMSSEQQHH HSHHHHQPHK MDLKAYEQVM HYPGGYGSPM PGSLAMGPVT NKAGLDASPL AADTSYYQGV YSRPIMNSS **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Foxa2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process

Product Details

	to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	FOXA2
Alternative Name:	Foxa2 (FOXA2 Products)

Target Details

Background:	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}.
Molecular Weight:	49.5 kDa Including tag.
UniProt:	P35583
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 gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
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