

Datasheet for ABIN3092659

FOXO1 Protein (AA 1-655) (His-Avi Tag,MBP tag)[Go to Product page](#)**3** Images

Overview

Quantity:	1 mg
Target:	FOXO1
Protein Characteristics:	AA 1-655
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXO1 protein is labelled with His-Avi Tag,MBP tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MHHHHHHKTE EGKLVIWING DKGYNGLAEV GKKFEKDTGI KVTVEHPDKL EEKFPQVAAT GDGPDIIFWA HDRFGGYAQS GLLAEITPDK AFQDKLYPFT WDAVRYNGKL IAYPIAVEAL SLIYNKDLLP NPPKTWEEIP ALDKELKAKG KSALMFNLQE PYFTWPLIAA DGGYAFKYEN GKYDIKDVGV DNAGAKAGLT FLVDLIKNGH MNADTDYSIA EAAFNGGETA MTINGPWAWS NIDTSKVNIG VTVLPTFKGQ PSKPFVGVLS AGINAASPNK ELAKEFLENY LLTDEGLEAV NKDKPLGAVA LKSYEEELAK DPRIATMEN AQKGEIMPNI PQMSAFWYAV RTAVINAASG RQTVDEALKD AQTGGGSGGG SENLYFQSAA AGLNDIFEAQ KIEWHEAEAP QVVEIDPDFE PLPRPRSCTW PLPRPEFSQS NSATSSPAPS GSAAANPDAA AGLPSASAAA VSADFMSNLS LLEESDFPQ APGSVAAAVA AAAAAAATGG LCGDFQGPEA GCLHPAPPQP PPPGPLSQHP PVPPAAAGPL AGQPRKSSSS RRNAWGNLSY ADLITKAIES SAEKRLTSLQ IYEWVMSVSP YFKDKGDSNS SAGWKNSIRH NLSLHSEFIR VQNEGTGKSS WWMLNPEGGK SGKSPRRRAA SMDNNSKFAK SRSRAAKKKA SLQSGQEGAG DSPGSQFSKW PASPGSHSND DFDNWSTFRP
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RTSSNASTIS GRLSPIMTEQ DDLGEGDVHS MVYPPSAAKM ASTLPSLSEI SNPENMENLL
DNLNLLSSPT SLTVSTQSSP GTMMQQTPCY SFAPPNTSLN SPSPNYQKYT YGQSSMSPLP
QMPIQTLQDN KSSYGGMSQY NCAPGLLKEK LTSDSPPHND IMTPVDPGVA QPNSRVLGQN
VMMGPNSVMS TYGSQASHNK MMNPSSHTHP GHAQTSASN GRPLPHTVST MPHTSGMNRL
TQVKTPVQVP LPHPMQMSAL GGYSSVSSCN GYGRMGLLHQ EKLPSDLGDM FIERLDCDME
SIIRNDLMDG DTLDFNFDNV LPNQSFPHSV KTTTHSWVSG

Specificity:	N-terminal His-tag, MBP-tag, TEV-site, Avi-tag
Characteristics:	<ul style="list-style-type: none">• Made in Germany - from design to production - by highly experienced protein experts.• Human FOXO1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.• State-of-the-art algorithm used for plasmid design (Gene synthesis). <p>This made-to-order protein has already been successfully produced. Please let us know if you are interested in purchasing a smaller amount of this protein. We will check our stock and make you a customized quote in case we can provide this protein in a smaller amount..</p> <p>When you order this made-to-order protein you will only pay upon receipt 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.</p> <p>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.</p> <p>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.</p>
Purification:	<p>Two step purification of proteins expressed in baculovirus infected SF9 insect cells:</p> <ol style="list-style-type: none">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:	FOXO1
Alternative Name:	FOXO1 (FOXO1 Products)
Background:	<p>Transcription factor that is the main target of insulin signaling and regulates metabolic homeostasis in response to oxidative stress. Binds to the insulin response element (IRE) with consensus sequence 5'-TT[G/A]TTTTG-3' and the related Daf-16 family binding element (DBE) with consensus sequence 5'-TT[G/A]TTTAC-3'. Activity suppressed by insulin. Main regulator of redox balance and osteoblast numbers and controls bone mass. Orchestrates the endocrine function of the skeleton in regulating glucose metabolism. Acts synergistically with ATF4 to suppress osteocalcin/BGLAP activity, increasing glucose levels and triggering glucose intolerance and insulin insensitivity. Also suppresses the transcriptional activity of RUNX2, an upstream activator of osteocalcin/BGLAP. In hepatocytes, promotes gluconeogenesis by acting together with PPARGC1A and CEBPA to activate the expression of genes such as IGFBP1, G6PC and PCK1. Important regulator of cell death acting downstream of CDK1, PKB/AKT1 and SKT4/MST1. Promotes neural cell death. Mediates insulin action on adipose tissue. Regulates the expression of adipogenic genes such as PPARG during preadipocyte differentiation and, adipocyte size and adipose tissue-specific gene expression in response to excessive calorie intake. Regulates the transcriptional activity of GADD45A and repair of nitric oxide-damaged DNA in beta-cells. Required for the autophagic cell death induction in response to starvation or oxidative stress in a transcription-independent manner. {ECO:0000250 UniProtKB:Q9R1E0, ECO:0000269 PubMed:10358076, ECO:0000269 PubMed:12228231, ECO:0000269 PubMed:15220471, ECO:0000269 PubMed:15890677, ECO:0000269 PubMed:18356527, ECO:0000269 PubMed:19221179, ECO:0000269 PubMed:20543840, ECO:0000269 PubMed:21245099}.</p>
Molecular Weight:	70.6 kDa Including tag.
UniProt:	Q12778
Pathways:	PI3K-Akt Signaling , Cell Division Cycle , Fc-epsilon Receptor Signaling Pathway , EGFR Signaling Pathway , Neurotrophin Signaling Pathway , Carbohydrate Homeostasis , Chromatin Binding , Regulation of Carbohydrate Metabolic Process , CXCR4-mediated Signaling Events , BCR Signaling

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
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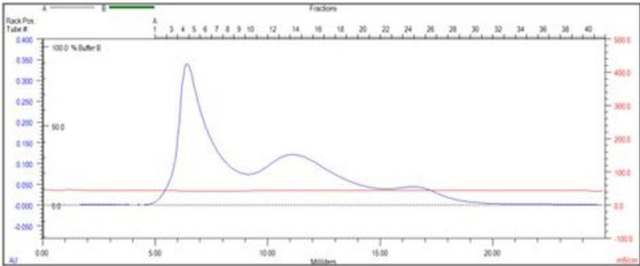
Application Details

	though.
Comment:	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:	20 mM Hepes pH 7.5, 600 mM NaCl, 1 mM EDTA, 10% glycerol
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



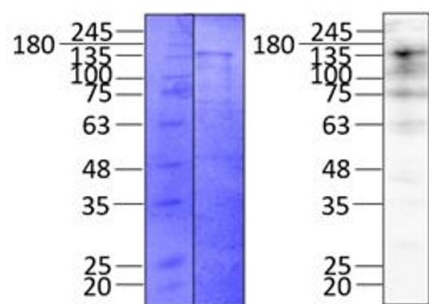
HUMAN Forkhead box protein O1 (FOXO1)|Q12778|gel filtration, Superdex 200 fractions 12-16

Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 1.



Image 2. „Crystallography Grade“ protein due to multi-step, protein-specific purification process



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Western Blotting

Image 3.