Datasheet for ABIN7565186

FOXO1 Protein (AA 1-652) (His tag)

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Overview

Quantity:	1 mg
Target:	FOXO1
Protein Characteristics:	AA 1-652
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXO1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Foxo1 Protein expressed in mammalien cells.
Sequence:	MAEAPQVVET DPDFEPLPRQ RSCTWPLPRP EFNQSNSTTS SPAPSGGAAA NPDAAASLAS ASAVSTDFMS NLSLLEESED FARAPGCVAV AAAAAASRGL CGDFQGPEAG CVHPAPPQPP PTGPLSQPPP VPPSAAAAAG PLAGQPRKTS SSRRNAWGNL SYADLITKAI ESSAEKRLTL SQIYEWMVKS VPYFKDKGDS NSSAGWKNSI RHNLSLHSKF IRVQNEGTGK SSWWMLNPEG GKSGKSPRRR AASMDNNSKF AKSRGRAAKK KASLQSGQEG PGDSPGSQFS KWPASPGSHS NDDFDNWSTF RPRTSSNAST ISGRLSPIMT EQDDLGDGDV HSLVYPPSAA KMASTLPSLS EISNPENMEN LLDNLNLLSS PTSLTVSTQS SPGSMMQQTP CYSFAPPNTS LNSPSPNYSK YTYGQSSMSP LPQMPMQTLQ DSKSSYGGLN QYNCAPGLLK ELLTSDSPPH NDIMSPVDPG VAQPNSRVLG QNVMMGPNSV MPAYGSQASH NKMMNPSSHT HPGHAQQTAS VNGRTLPHVV NTMPHTSAMN RLTPVKTPLQ VPLSHPMQMS ALGSYSSVSS CNGYGRMGVL HQEKLPSDLD GMFIERLDCD MESIIRNDLM DGDTLDFNFD NVLPNQSFPH SVKTTTHSWV SG **Sequence**

Product Details

	without tag. The proposed Purification-Tag is based on experiences 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 to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	FOXO1
Alternative Name:	Foxo1 (FOXO1 Products)
Background:	Forkhead box protein O1 (Forkhead box protein O1A) (Forkhead in rhabdomyosarcoma),FUNCTION: Transcription factor that is the main target of insulin signaling and regulates metabolic homeostasis in response to oxidative stress (PubMed:12219087, PubMed:12754525, PubMed:15184386, PubMed:15220471, PubMed:16917544, PubMed:17090532, PubMed:17627282, PubMed:17681146, PubMed:20519497, PubMed:20668652, PubMed:21196578, PubMed:21335550, PubMed:21471200, PubMed:22298775, PubMed:22417654, PubMed:22510882, PubMed:27457971, PubMed:34914893). 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' (PubMed:17090532, PubMed:21335550). Activity suppressed by

insulin (PubMed:12754525, PubMed:17627282). Main regulator of redox balance and osteoblast numbers and controls bone mass (PubMed:21471200, PubMed:22298775). Orchestrates the endocrine function of the skeleton in regulating glucose metabolism (PubMed:21471200, PubMed:22298775). Also acts as a key regulator of chondrogenic commitment of skeletal progenitor cells in response to lipid availability: when lipids levels are low, translocates to the nucleus and promotes expression of SOX9, which induces chondrogenic commitment and suppresses fatty acid oxidation (PubMed:32103177). Acts synergistically with ATF4 to suppress osteocalcin/BGLAP activity, increasing glucose levels and triggering glucose intolerance and insulin insensitivity (PubMed:22298775). Also suppresses the transcriptional activity of RUNX2, an upstream activator of osteocalcin/BGLAP (PubMed:21471200). Acts as an inhibitor of glucose sensing in pancreatic beta cells by acting as a transcription repressor and suppressing expression of PDX1 (PubMed:12219087, PubMed:27457971). In hepatocytes, promotes gluconeogenesis by acting together with PPARGC1A and CEBPA to activate the expression of genes such as IGFBP1, G6PC1 and PCK1 (PubMed:12754525, PubMed:25009184). Also promotes gluconeogenesis by directly promoting expression of PPARGC1A and G6PC1 (By similarity). Important regulator of cell death acting downstream of CDK1, PKB/AKT1 and STK4/MST1 (By similarity). Promotes neural cell death (By similarity). Mediates insulin action on adipose tissue (By similarity). 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 (By similarity). Regulates the transcriptional activity of GADD45A and repair of nitric oxide-damaged DNA in beta-cells (PubMed:21196578). Required for the autophagic cell death induction in response to starvation or oxidative stress in a transcription-independent manner (By similarity). Mediates the function of MLIP in cardiomyocytes hypertrophy and cardiac remodeling (By similarity). Positive regulator of apoptosis in cardiac smooth muscle cells as a result of its transcriptional activation of pro-apoptotic genes (By similarity). Regulates endothelial cell (EC) viability and apoptosis in a PPIA/CYPA-dependent manner via transcription of CCL2 and BCL2L11 which are involved in EC chemotaxis and apoptosis (By similarity). {ECO:0000250|UniProtKB:A4L7N3, ECO:0000250|UniProtKB:G3V7R4, ECO:0000250|UniProtKB:Q12778, ECO:0000269|PubMed:12219087, ECO:0000269|PubMed:12754525, ECO:0000269|PubMed:15184386, ECO:0000269|PubMed:15220471, ECO:0000269|PubMed:16917544, ECO:0000269|PubMed:17090532, ECO:0000269|PubMed:17627282, ECO:0000269|PubMed:17681146, ECO:0000269|PubMed:20519497, ECO:0000269|PubMed:20668652, ECO:0000269|PubMed:21196578, ECO:0000269|PubMed:21335550, ECO:0000269|PubMed:21471200,

Target Details

	ECO:0000269|PubMed:22298775, ECO:0000269|PubMed:22417654, ECO:0000269|PubMed:22510882, ECO:0000269|PubMed:25009184, ECO:0000269|PubMed:27457971, ECO:0000269|PubMed:32103177, ECO:0000269|PubMed:34914893}.
Molecular Weight:	69.5 kDa
UniProt:	Q9R1E0
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 though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition 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:	12 months

