Datasheet for ABIN3080197

FOXC1 Protein (AA 1-553) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	FOXC1
Protein Characteristics:	AA 1-553
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This FOXC1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	MQARYSVSSP NSLGVVPYLG GEQSYYRAAA AAAGGGYTAM PAPMSVYSHP AHAEQYPGGM ARAYGPYTPQ PQPKDMVKPP YSYIALITMA IQNAPDKKIT LNGIYQFIMD RFPFYRDNKQ GWQNSIRHNL SLNECFVKVP RDDKKPGKGS YWTLDPDSYN MFENGSFLRR RRRFKKKDAV KDKEEKDRLH LKEPPPPGRQ PPPAPPEQAD GNAPGPQPPP VRIQDIKTEN GTCPSPPQPL SPAAALGSGS AAAVPKIESP DSSSSSLSSG SSPPGSLPSA RPLSLDGADS APPPPAPSAP PPHHSQGFSV DNIMTSLRGS PQSAAAELSS GLLASAAASS RAGIAPPLAL GAYSPGQSSL YSSPCSQTSS AGSSGGGGGG AGAAGGAGGA GTYHCNLQAM SLYAAGERGG HLQGAPGGAG GSAVDDPLPD YSLPPVTSSS SSSLSHGGGG GGGGGGQEAG HHPAAHQGRL TSWYLNQAGG DLGHLASAAA AAAAAGYPGQ QQNFHSVREM FESQRIGLNN SPVNGNSSCQ MAFPSSQSLY RTSGAFVYDC SKF **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.
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:	FOXC1
Alternative Name:	FOXC1 (FOXC1 Products)
Background:	Forkhead box protein C1 (Forkhead-related protein FKHL7) (Forkhead-related transcription factor 3) (FREAC-3),FUNCTION: DNA-binding transcriptional factor that plays a role in a broad range of cellular and developmental processes such as eye, bones, cardiovascular, kidney and skin development (PubMed:11782474, PubMed:15299087, PubMed:15684392, PubMed:16492674, PubMed:27907090, PubMed:14506133, PubMed:14578375, PubMed:15277473, PubMed:16449236, PubMed:17210863, PubMed:19793056, PubMed:19279310, PubMed:25786029, PubMed:27804176). Acts either as a transcriptional activator or repressor (PubMed:11782474). Binds to the consensus binding site 5'-[G/C][A/T]AAA[T/C]AA[A/C]-3' in promoter of target genes (PubMed:7957066, PubMed:11782474, PubMed:12533514, PubMed:14506133, PubMed:19793056, PubMed:27804176). Upon DNA-binding, promotes DNA bending (PubMed:7957066, PubMed:14506133). Acts as a transcriptional coactivator (PubMed:26565916). Stimulates Indian hedgehog (Ihh)-induced target gene expression mediated by the transcription factor GLI2, and hence regulates endochondral ossification (By similarity). Acts also as a transcriptional coregulator by increasing DNA-binding capacity of GLI2 in breast cancer cells (PubMed:26565916). Regulates FOXO1 through binding to a conserved element, 5'-GTAAACAAA-3' in its promoter region, implicating FOXC1 as an important regulator of cell viability and resistance to oxidative stress in the eye (PubMed:17993506). Cooperates with transcription factor FOXC2 in regulating expression of genes that maintain podocyte integrity (By similarity). Promotes cell growth inhibition by stopping the cell cycle in the G1 phase through TGFB1-mediated signals (PubMed:12408963). Involved in epithelial-mesenchymal transition (EMT) induction by increasing cell proliferation, migration and invasion (PubMed:20406990, PubMed:22991501). Involved in chemokine CXCL12-induced endothelial cell migration through the control of CXCR4 expression (By similarity). Plays a role in the gene regulatory network essential for epidermal keratinocyte terminal differentiation (PubMed:27907090). Essential developmental transcriptional factor required for mesoderm-derived tissues, such as the somites, skin, bone and cartilage. Positively regulates CXCL12 and stem cell factor expression in bone marrow mesenchymal progenitor cells, and hence plays a role in the development and maintenance of mesenchymal niches for haematopoietic stem and progenitor cells (HSPC). Plays a role in corneal transparency by preventing both blood vessel and lymphatic vessel growth during embryonic development in a VEGF-dependent manner. Involved in chemokine CXCL12-induced endothelial cell migration through the control of CXCR4 expression (By similarity). May function as a tumor suppressor (PubMed:12408963).

Target Details

	{ECO:0000250|UniProtKB:Q61572, ECO:0000269|PubMed:11782474, ECO:0000269|PubMed:12408963, ECO:0000269|PubMed:12533514, ECO:0000269|PubMed:14506133, ECO:0000269|PubMed:14578375, ECO:0000269|PubMed:15277473, ECO:0000269|PubMed:15299087, ECO:0000269|PubMed:15684392, ECO:0000269|PubMed:16449236, ECO:0000269|PubMed:16492674, ECO:0000269|PubMed:17210863, ECO:0000269|PubMed:17993506, ECO:0000269|PubMed:19279310, ECO:0000269|PubMed:19793056, ECO:0000269|PubMed:20406990, ECO:0000269|PubMed:22991501, ECO:0000269|PubMed:25786029, ECO:0000269|PubMed:26565916, ECO:0000269|PubMed:27804176, ECO:0000269|PubMed:27907090, ECO:0000269|PubMed:7957066}.
Molecular Weight:	56.8 kDa
UniProt:	Q12948
Pathways:	Chromatin Binding, Glycosaminoglycan 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. 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!
Restrictions:	For Research Use only

Handling

Format:	Liquid

Handling

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