Datasheet for ABIN3136624

GRHL2 Protein (AA 1-625) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	GRHL2
Protein Characteristics:	AA 1-625
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GRHL2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MSQESDNNKR LVALVPMPSD PPFNTRRAYT SEDEAWKSYL ENPLTAATKA MMSINGDEDS AAALGLLYDY YKVPRDKRLL SVSKASDSQE DQDKRNCLGT SEAQINLSGG ENRVQVLKTV PVNLCLSQDH MENSKREQYS VSITESSAVI PVSGITVVKA EDFTPVFMAP PVHYPRADSE EQRVVIFEQT QYDLPSIASH SSYLKDDQRS TPDSTYSESF KDGASEKFRS TSVGADEYTY DQTGSGTFQY TLEATKSLRQ KQGEGPMTYL NKGQFYAITL SETGDNKCFR HPISKVRSVV MVVFSEDKNR DEQLKYWKYW HSRQHTAKQR VLDIADYKES FNTIGNIEEI AYNAVSFTWD VNEEAKIFIT VNCLSTDFSS QKGVKGLPLM IQIDTYSYNN RSNKPIHRAY CQIKVFCDKG AERKIRDEER KQNRKKGKGQ ASQAQCNNSS DGKMAAIPLQ KKSDITYFKT MPDLHSQPVL FIPDVHFANL QRTGQVYYNT DDEREGSSVL VKRMFRPMEE EFGPTPSKQI KEENVKRVLL YVRKENDDVF DALMLKSPTV KGLMEALSEK YGLPVEKITK LYKKSKKGIL VNMDDNIIEH YSNEDTFILN MESMVEGFKI TLMEI

Product Details

	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).

Product Details

Grade:	custom-made

Target Details

Target:	GRHL2
Alternative Name:	Grhl2 (GRHL2 Products)
Background:	Grainyhead-like protein 2 homolog (Brother of mammalian grainyhead) (Transcription factor CP2-like 3),FUNCTION: Transcription factor playing an important role in primary neurulation and in epithelial development. Binds directly to the consensus DNA sequence 5'-AACCGGTT-3' acting as an activator and repressor on distinct target genes (PubMed:22696678). During embryogenesis, plays unique and cooperative roles with GRHL3 in establishing distinct zones of primary neurulation. Essential for closure 3 (rostral end of the forebrain), functions cooperatively with GRHL3 in closure 2 (forebrain/midbrain boundary) and posterior neuropore closure (PubMed:20654612). Regulates epithelial morphogenesis acting as a target gene-associated transcriptional activator of apical junctional complex components. Up-regulates of CLDN3 and CLDN4, as well as of RAB25, which increases the CLDN4 protein and its localization at tight junctions (PubMed:22696678). Comprises an essential component of the transcriptional machinery that establishes appropriate expression levels of CLDN4 and CDH1 in different types of epithelia (PubMed:20978075). Exhibits functional redundancy with GRHL3 in epidermal morphogenetic events such as eyelid fusion and epidermal wound repair (PubMed:21081122). In lung, forms a regulatory loop with NKX2-1 that coordinates lung epithelial cell morphogenesis and differentiation (PubMed:22955271). In keratinocytes, plays a role in telomerase activation during cellular proliferation, regulates TERT expression by binding to TERT promoter region and inhibiting DNA methylation at the 5'-CpG island, possibly by interfering with DNMT1 enzyme activity. In addition, impairs keratinocyte differentiation and epidermal function by inhibiting the expression of genes clustered at the epidermal differentiation complex (EDC) as well as GRHL1 and GRHL3 through epigenetic mechanisms (By similarity). {ECO:0000250|UniProtKB:Q6ISB3, ECO:0000269|PubMed:20654612, ECO:0000269|PubMed:20978075, ECO:0000269|PubMed:21081122, ECO:0000269|PubMed:22696678, ECO:0000269|PubMed:22955271}.
Molecular Weight:	71.2 kDa
UniProt:	Q8K5C0
Pathways:	Tube Formation

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
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