

Datasheet for ABIN3135192  
**GRHL3 Protein (AA 1-603) (Strep Tag)**



[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	GRHL3
Protein Characteristics:	AA 1-603
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GRHL3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	<p>MSNELDFRSV RLLKNDPVSF QKFPYSNEDE AWKTYLENPL TAATKAMMRV NGDEESVAAL SFLYDYVMGP KEKRILSSST GGRNDQGKKF YHSM DYEPDL APLESPHLM KFLTENVSGS PDYTDQLKKN NLLGLEGLVLP TPGKTNTVPP GPSKLEASSM DSYLLPASDI YDNGSLNSLF ESIHGVPPTQ RWQPDSTFKD DPQESLLFPD ILKTSPDPPC PEDYPGLKSD FEYTLGSPKA IHIKAGESPM AYLNKGQFYP VTLRTPAGGK GLALSSSKVK SVVMVVDND KVPVEQLRFW RHWHSRQPTA KQRVIDVADC KENFNTVQHI EEVAYNALS FVWNVNEEAKV FIGVNC LSTD FSSQKGVKGV PLNLQIDTYD CGAGTERLVH RAVCQIKIFC DKGAERKMRD DERKQFRRKV KCPDSSNNAG IKGCLLSGFR GNETTYLRPE TDLETQPVL FIPNLHFSSLQ RPGGVVPSAG HSSDRPLPK RTCSPFAEEF EPLPSKQAKE DDLQRVLLYV RRETEEVFDA LMLKTPDLKG LRNAISEKYG LPEENICKVY KKCKRGILVN MDNNIIQHYS NHVAFLLDMG ELDGKIQIIL KEL</p> <p><b>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</b></p>
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### have a special request, please contact us.

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#### 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.

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#### Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

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#### Purity:

> 80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

## Target Details

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Target: GRHL3

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Alternative Name: Grhl3 ([GRHL3 Products](#))

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Background: Grainyhead-like protein 3 homolog (Transcription factor CP2-like 4),FUNCTION: Transcription factor playing important roles in primary neurulation and in the differentiation of stratified epithelia of both ectodermal and endodermal origin. Binds directly to the consensus DNA sequence 5'-AACCGGTT-3' acting as an activator and repressor on distinct target genes. Essential for epidermal differentiation and barrier formation at the end of embryogenesis with TGM3 as critical direct target (PubMed:21081122, PubMed:20654612, PubMed:25347468). Exhibits functional redundancy with GRHL2 in epidermal morphogenetic events such as eyelid fusion and epidermal wound repair (PubMed:21081122). Despite being dispensable during normal epidermal homeostasis in the adulthood, is again required for barrier repair after immune-mediated epidermal damage, regulates distinct gene batteries in embryonic epidermal differentiation and adult epidermal barrier reformation after injury (PubMed:25347468). Plays unique and cooperative roles with GRHL2 in establishing distinct zones of primary neurulation. Essential for spinal closure, functions cooperatively with GRHL2 in closure 2 (forebrain/midbrain boundary) and posterior neuropore closure (PubMed:14608380, PubMed:20654612). Also required for proper development of the oral periderm (PubMed:24360809). No genetic interaction with GRHL1, no functional cooperativity due to diverse target gene selectivity (PubMed:21081122). {ECO:0000269|PubMed:14608380, ECO:0000269|PubMed:16949565, ECO:0000269|PubMed:20654612, ECO:0000269|PubMed:21081122, ECO:0000269|PubMed:24360809, ECO:0000269|PubMed:25347468}.

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Molecular Weight: 67.8 kDa

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UniProt: [Q5FWH3](#)

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## Application Details

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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.

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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.

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## Application Details

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Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)