

Datasheet for ABIN3095384

## SIAH1 Protein (AA 1-282) (Strep Tag)



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### Overview

|                               |  |
|-------------------------------|--|
| Quantity:                     | 250 µg   |
| Target:                       | SIAH1  |
| Protein Characteristics:      | AA 1-282                                       |
| Origin:                       | Human  |
| Source:                       | Cell-free protein synthesis (CFPS)             |
| Protein Type:                 | Recombinant                                    |
| Purification tag / Conjugate: | This SIAH1 protein is labelled with Strep Tag. |
| Application:                  | ELISA, Western Blotting (WB), SDS-PAGE (SDS)   |

### Product Details

|           |  |
|-----------|--|
| Brand:    | AlIcE®   |
| Sequence: | <p>MSRQTATALP TGTSKCPPSQ RVPALTGTTA SNNDLASLFE CPVCFDYVLP PILQCQSGHL<br/> VCSNCRPKLT CCPTCRGPLG SIRNLAMEKV ANSVLFPCKY ASSGCEITLP HTEKADHEEL<br/> CEFRPYSCPC PGASCKWQGS LDAVMPHLMH QHKSITTLQG EDIVFLATDI NLPGAVDWVM<br/> MQSCFGFHFH LVLEKQEKYD GHQQFFAIVQ LIGTRKQAEN FAYRLELNHG RRRLTWEATP<br/> RSIHEGIATA IMNSDCLVFD TSIAQLFAEN GNLGINVTIS MC</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 have a special request, please contact us.</b></p> |

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|------------------|---|
| Characteristics: | <p>Key Benefits:</p> <ul style="list-style-type: none"> <li>Made in Germany - from design to production - by highly experienced protein experts.</li> </ul> |
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## Product Details

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- 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

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| Target:           | SIAH1                                    |
| Alternative Name: | SIAH1 ( <a href="#">SIAH1 Products</a> ) |

## Target Details

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**Background:** E3 ubiquitin-protein ligase SIAH1 (EC 2.3.2.27) (RING-type E3 ubiquitin transferase SIAH1) (Seven in absentia homolog 1) (Siah-1) (Siah-1a),FUNCTION: E3 ubiquitin-protein ligase that mediates ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:14506261, PubMed:14645235, PubMed:14654780, PubMed:15064394, PubMed:16085652, PubMed:19224863, PubMed:20508617, PubMed:22483617, PubMed:9334332, PubMed:9858595, PubMed:28546513, PubMed:32430360, PubMed:33591310). E3 ubiquitin ligases accept ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates (PubMed:14506261, PubMed:14645235, PubMed:14654780, PubMed:15064394, PubMed:16085652, PubMed:19224863, PubMed:20508617, PubMed:22483617, PubMed:9334332, PubMed:9858595). Mediates E3 ubiquitin ligase activity either through direct binding to substrates or by functioning as the essential RING domain subunit of larger E3 complexes (PubMed:14506261, PubMed:14645235, PubMed:14654780, PubMed:15064394, PubMed:16085652, PubMed:19224863, PubMed:20508617, PubMed:22483617, PubMed:9334332, PubMed:9858595). Triggers the ubiquitin-mediated degradation of many substrates, including proteins involved in transcription regulation (ELL2, MYB, POU2AF1, PML and RBBP8), a cell surface receptor (DCC), the cell-surface receptor-type tyrosine kinase FLT3, the cytoplasmic signal transduction molecules (KLF10/TIEG1 and NUMB), an antiapoptotic protein (BAG1), a microtubule motor protein (KIF22), a protein involved in synaptic vesicle function in neurons (SYP), a structural protein (CTNNB1) and SNCAIP (PubMed:10747903, PubMed:11146551, PubMed:11389839, PubMed:11389840, PubMed:11483517, PubMed:11483518, PubMed:11752454, PubMed:12072443). Confers constitutive instability to HIPK2 through proteasomal degradation (PubMed:18536714, PubMed:33591310). It is thereby involved in many cellular processes such as apoptosis, tumor suppression, cell cycle, axon guidance, transcription regulation, spermatogenesis and TNF-alpha signaling (PubMed:14506261, PubMed:14645235, PubMed:14654780, PubMed:15064394, PubMed:16085652, PubMed:19224863, PubMed:20508617, PubMed:22483617, PubMed:9334332, PubMed:9858595). Has some overlapping function with SIAH2 (PubMed:14506261, PubMed:14645235, PubMed:14654780, PubMed:15064394, PubMed:16085652, PubMed:19224863, PubMed:20508617, PubMed:22483617, PubMed:9334332, PubMed:9858595). Induces apoptosis in cooperation with PEG3 (By similarity). Upon nitric oxid (NO) generation that follows apoptotic stimulation, interacts with S-nitrosylated GAPDH, mediating the translocation of GAPDH to the nucleus (By similarity). GAPDH acts as a stabilizer of SIAH1, facilitating the degradation of nuclear proteins (By similarity). Mediates ubiquitination and degradation of EGLN2 and EGLN3 in response to the unfolded protein response (UPR), leading to their degradation and subsequent stabilization of

## Target Details

ATF4 (By similarity). Also part of the Wnt signaling pathway in which it mediates the Wnt-induced ubiquitin-mediated proteasomal degradation of AXIN1 (PubMed:28546513, PubMed:32430360). {ECO:0000250|UniProtKB:P61092, ECO:0000250|UniProtKB:Q920M9, ECO:0000269|PubMed:10747903, ECO:0000269|PubMed:11146551, ECO:0000269|PubMed:11389839, ECO:0000269|PubMed:11389840, ECO:0000269|PubMed:11483517, ECO:0000269|PubMed:11483518, ECO:0000269|PubMed:11752454, ECO:0000269|PubMed:12072443, ECO:0000269|PubMed:14506261, ECO:0000269|PubMed:14645235, ECO:0000269|PubMed:14654780, ECO:0000269|PubMed:15064394, ECO:0000269|PubMed:16085652, ECO:0000269|PubMed:18536714, ECO:0000269|PubMed:19224863, ECO:0000269|PubMed:20508617, ECO:0000269|PubMed:22483617, ECO:0000269|PubMed:28546513, ECO:0000269|PubMed:32430360, ECO:0000269|PubMed:9334332, ECO:0000269|PubMed:9858595}.

Molecular Weight: 31.1 kDa

UniProt: [Q8IUQ4](#)

## 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.

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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.<br>Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b> |
| Handling Advice: | Avoid repeated freeze-thaw cycles.   |
| Storage:         | -80 °C   |
| Storage Comment: | Store at -80°C.  |
| Expiry Date:     | 12 months  |