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Datasheet for ABIN3134740  
**SHC1 Protein (AA 1-579) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	SHC1
Protein Characteristics:	AA 1-579
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SHC1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

### Product Details

Sequence: MDLLPPKPKY NPLRNESLSS LEEGASGSTP PEELSPSAS SLGPILPPLP GDDSPTTLCS  
FFPRMSNLKL ANPAGGRLGP KGEPGKAAED GEGSAGAALR DSGLLPLLQD MNKLSGGGGR  
RTRVEGGQLG GEEWTRHGSF VNKPTRGWLH PNDKVMGPGV SYLVRYMGCV EVLQSMRALD  
FNTRTQVTRE AISLVCEAVP GAKGATRRRK PCSRPLSSIL GRSNLKFAGM PITLTVSTSS  
LNLMAADCKQ IIANHHMQSI SFASGGPDT AEYVAYVAKD PVNQRACHIL ECPEGLAQDV  
ISTIGQAFEL RFKQYLRNPP KLVTPHDRMA GFDGSAWDEE EEEPPDHQYY NDFPGKEPPL  
GGVDMRLRE GAARPTLPSA QMSSHLGATL PIGQHAAGDH EVRKQMLPPP PCPGRELFDD  
PSYVNIQNLD KARQAGGGAG PPNPSLNGSA PRDLFDMKPF EDALRVPPPP QSMSMAEQLQ  
GEPWFHGKLS RREAELLQL NGDFLVREST TTPGQYVLTG LQSQPKHLL LVDPEGVVRT  
KDHREFSVSH LISYHMDNHL PIISAGSELC LQQPVDRKV

**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.

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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 by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is 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:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.

## Product Details

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2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:  $\geq 80\%$  as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg ( $< 0.1$  ng/mg)

## Target Details

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Target: SHC1

Alternative Name: Shc1 ([SHC1 Products](#))

Background: SHC-transforming protein 1 (SHC-transforming protein A) (Src homology 2 domain-containing-transforming protein C1) (SH2 domain protein C1),FUNCTION: Signaling adapter that couples activated growth factor receptors to signaling pathways. Participates in signaling downstream of the angiotensin receptor TEK/TIE2, and plays a role in the regulation of endothelial cell migration and sprouting angiogenesis (By similarity). Participates in a signaling cascade initiated by activated KIT and KITLG/SCF. Isoform p47Shc and isoform p52Shc, once phosphorylated, couple activated receptor kinases to Ras via the recruitment of the GRB2/SOS complex and are implicated in the cytoplasmic propagation of mitogenic signals. Isoform p47Shc and isoform p52 may thus function as initiators of the Ras signaling cascade in various non-neuronal systems. Isoform p66Shc does not mediate Ras activation, but is involved in signal transduction pathways that regulate the cellular response to oxidative stress and life span. Isoform p66Shc acts as a downstream target of the tumor suppressor p53 and is indispensable for the ability of stress-activated p53 to induce elevation of intracellular oxidants, cytochrome c release and apoptosis. The expression of isoform p66Shc has been correlated with life span. {ECO:0000250, ECO:0000269|PubMed:12571362, ECO:0000269|PubMed:17272725}.

Molecular Weight: 62.6 kDa

UniProt: [P98083](#)

Pathways: [RTK Signaling](#), [TCR Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [ER-Nucleus Signaling](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#)

## 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.

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!

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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

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**Handling Advice:** Avoid repeated freeze-thaw cycles.

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**Storage:** -80 °C

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**Storage Comment:** Store at -80°C.

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**Expiry Date:** Unlimited (if stored properly)

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