

Datasheet for ABIN3092912  
**HIC1 Protein (AA 1-733) (Strep Tag)**



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1 Image

Overview

Quantity:	1 mg
Target:	HIC1
Protein Characteristics:	AA 1-733
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This HIC1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MTFPEADILL KSGECAGQTM LDTMEAPGHS RQLLLQLNNQ RTKGFLCDVI IVVQNALFRA  
HKNVLAASSA YLKSLVVDHN LLNLDHDMVS PAVFRLVLDI IYTGRLADGA EAAAAA AVAP  
GAEPSLGAVL AAASYLQIPD LVALCKKRLK RHGKYCHLRG GGGGGGGYAP YGRPGRGLRA  
ATPVIQACYP SPVGPPPPPA AEPPSGPEAA VNTHCAELYA SGPGPAAALC ASERRCSPLC  
GLDLSKKSPG GSAAPERPLA ERELPPRPDS PPSAGPAAYK EPPLALPSLP PLPFQKLEEA  
APPSDPFRGG SGSPGPEPPG RPDGPSLLYR WMKHEPGLGS YGDELGRERG SPSERCEERG  
GDAAVSPGGP PLGLAPPPRY PGSLDGPAG GDGDDYKSSS EETGSSEDPS PPGGHLEGYP  
CPHLAYGEPE SFGDNLYVCI PCGKGFPSSE QLNAHVEAHV EEEEEALYGRA EAAEVAAGAA  
GLGPPFGGGG DKVAGAPGGL GELLRPYRCA SCDKSYKDPA TLRQHEKTHW LTRPYPCTIC  
GKKFTQRGTM TRHMRSHLGL KPFIACDACGM RFTRQYRLTE HMRIHSGEKP YECQVCGGKF  
AQQRNLISHM KMHAVGGAAG AAGALAGLGG LPGVPGPDGK GKLDPEGVF AVARLTAEQL  
SLKQQDKAAA AELLAQTTHF LHDPKVALES LYPLAKFTAE LGLSPDKAAE VLSQGAHLAA

GPDGRTIDRF SPT

**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

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## Product Details

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(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.
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.

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

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

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Grade: Crystallography grade

## Target Details

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Target: HIC1

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Alternative Name: HIC1 ([HIC1 Products](#))

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Background: Hypermethylated in cancer 1 protein (Hic-1) (Zinc finger and BTB domain-containing protein 29),FUNCTION: Transcriptional repressor (PubMed:12052894, PubMed:15231840). Recognizes and binds to the consensus sequence '5-[CG]NG[CG]GGGCA[CA]CC-3' (PubMed:15231840). May act as a tumor suppressor (PubMed:20154726). Involved in development of head, face, limbs and ventral body wall (By similarity). Involved in down-regulation of SIRT1 and thereby is involved in regulation of p53/TP53-dependent apoptotic DNA-damage responses (PubMed:16269335). The specific target gene promoter association seems to be depend on corepressors, such as CTBP1 or CTBP2 and MTA1 (PubMed:12052894, PubMed:20547755). In cooperation with MTA1 (indicative for an association with the NuRD complex) represses transcription from CCND1/cyclin-D1 and CDKN1C/p57Kip2 specifically in quiescent cells (PubMed:20547755). Involved in regulation of the Wnt signaling pathway probably by association with TCF7L2 and preventing TCF7L2 and CTNNB1 association with promoters of TCF-responsive genes (PubMed:16724116). Seems to repress transcription from E2F1 and ATOH1 which involves ARID1A, indicative for the participation of a distinct SWI/SNF-type chromatin-remodeling complex (PubMed:18347096, PubMed:19486893). Probably represses transcription of ACKR3, FGF1P1 and EFNA1 (PubMed:16690027, PubMed:19525223, PubMed:20154726). {ECO:0000250|UniProtKB:Q9R1Y5, ECO:0000269|PubMed:12052894, ECO:0000269|PubMed:15231840, ECO:0000269|PubMed:16269335, ECO:0000269|PubMed:16690027, ECO:0000269|PubMed:16724116, ECO:0000269|PubMed:18347096, ECO:0000269|PubMed:19486893, ECO:0000269|PubMed:19525223, ECO:0000269|PubMed:20154726,

## Target Details

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ECO:0000269|PubMed:20547755}.

Molecular Weight: 76.5 kDa

UniProt: [Q14526](#)

Pathways: [Positive Regulation of Response to DNA Damage Stimulus](#)

## 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.

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

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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)



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process