



[Go to Product page](#)

Datasheet for ABIN3133154
GADD34 Protein (AA 1-657) (Strep Tag)

Overview

Quantity:	1 mg
Target:	GADD34 (PPP1R15A)
Protein Characteristics:	AA 1-657
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GADD34 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MAPSPRPQHV LHWDAHNFY LLSPLMGLLS RAW SRLGPE VPEAWLAKTV TGADQIEAAA
LLTPTVSGN LLPHGTEES GSPEQSQAAQ RLCLVEAESS PPETWGLSNV DEYNAKPGQD
DLREKEMERT AGKATLQPAG LQGADKRLGE VVAREEGVAE PAYPTSQLEG GPAENEEDGE
TVKTYQASAA SIAPGYKPST PVPFLGAEH QATEEKGTEN KADPSNSPSS GSHSRAW EYY
SREKPKQEGE AKVEAHRAGQ GHPCRNAEAE EGGPETTFVC TGN AFLKAWV YRPGEDTEEE
DNSDSDSAEE DTAQTGATPH TSAFLKAWVY R PGEDTEEED SDSDSA EEDT AQTGATPHTS
AFLKAWVYRP GEDTEEENS DLSAEEDTAQ TGATPHTSAF LKAWVYRPGE DTEEENS DLD
SAEEDTAQTG ATPHTSPFLK AWVYRPGEDT EDDTEEEEDS ENVAPGDSET ADSSQSPCLQ
PQRCLPGEKT KGRGEEPLF QVAFYLPGEK PESPWAAPKL PLRLQRRRLRL FKAPTRDQDP
EIPLKARKVH FAEKVT VHFL AVWAGPAQAA RRG PW EQFAR DRSRFARRIA QAEEKLGPYL
TPDSRARAWA RLRNPSLPQS EPRSSSEATP LTQDVTTPSP LPSETPSPSL YLGGRRG

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 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.

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
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Product Details

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.

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

Target: GADD34 (PPP1R15A)

Alternative Name: Ppp1r15a ([PPP1R15A Products](#))

Background: Protein phosphatase 1 regulatory subunit 15A (Growth arrest and DNA damage-inducible protein GADD34) (Myeloid differentiation primary response protein MyD116),FUNCTION: Recruits the serine/threonine-protein phosphatase PPP1CA to prevents excessive phosphorylation of the translation initiation factor eIF-2A/EIF2S1, thereby reversing the shut-off of protein synthesis initiated by stress-inducible kinases and facilitating recovery of cells from stress (PubMed:11381086, PubMed:12824288). Down-regulates the TGF-beta signaling pathway by promoting dephosphorylation of TGFB1 by PP1 (By similarity). May promote apoptosis by inducing TP53 phosphorylation on 'Ser-15' (By similarity). Plays an essential role in autophagy by tuning translation during starvation, thus enabling lysosomal biogenesis and a sustained autophagic flux (By similarity). Acts also a viral restriction factor by attenuating vesicular stomatitis virus (VSV) replication (PubMed:17670836).
{ECO:0000250|UniProtKB:O75807, ECO:0000269|PubMed:11381086, ECO:0000269|PubMed:12606582, ECO:0000269|PubMed:12824288, ECO:0000269|PubMed:16478986, ECO:0000269|PubMed:17670836}.

Molecular Weight: 71.8 kDa

UniProt: [P17564](#)

Pathways: [ER-Nucleus Signaling](#), [Unfolded Protein Response](#)

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.

Application Details

Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

Handling

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)