

Datasheet for ABIN3092784

## GIT1 Protein (GIT1) (AA 1-761) (Strep Tag)



[Go to Product page](#)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	GIT1
Protein Characteristics:	AA 1-761
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GIT1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### Product Details

Sequence:	MSRKGPRAEV CADCSAPDPG WASISRGVLV CDECCSVHRS LGRHISIVKH LRHSAWPPTL LQMVHTLASN GANSIWEHSL LDPAQVQSGR RKANPQDKVH PIKSEFIRAK YQMLAFVHKL PCRDDDGVT A KDL SKQLHSS VRTGNLETCL RLLSLGAQAN FFHPEKGTTP LHVAAKAGQT LQAELLVVY G ADPGSPDVNG RTPIDYARQA GHHELAERLV ECQYELTDRL AFYLCGRKPD HKNGHYIIPQ MADSLDLSEL AKA AKKKLQA LSNRLFEELA MDVYDEVDRR ENDAVWLATQ NHSTLVTERS AVPFLPVNPE YSATRNQGRQ KLARFNAREF ATLIIDILSE AKRRQQGKSL SSPTDNLELS LRSQSDLDDQ HDYDSVASDE DTDQEPLRST GATRSNRARS MDSSDLSDGA VTLQEYLELK KALATSEAKV QQLMKVNSSL SDELRR LQRE IHKLQAENLQ LRQPPGPVPT PPLPSERA EH TMAPGGSTH RRDRQAFSMY EPGSALKPFG GPPGDEL TTR LQPFHSTELE DDAIYSVHVP AGLYRIRKGV SASAVPFTPS SPLSCSQEG SRHTSKLSRH GSGADSDYEN TQSGDPLLGL EGKRFLELGK EEDFHPELES LDGDLDPGLP STEDVILKTE QVTKNIQELL RAAQEFKHDS FVPCSEKIHL AVTEMASLFP KRPALEPVRS SLRLLNASAY RLQSECRKTV
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PPEPGAPVDF QLLTQQVIQC AYDIAKAAKQ LVTITTREKK Q

**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

(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.

Purity:	>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)
Grade:	Crystallography grade

## Target Details

Target:	GIT1
Alternative Name:	GIT1 ( <a href="#">GIT1 Products</a> )
Background:	<p>ARF GTPase-activating protein GIT1 (ARF GAP GIT1) (Cool-associated and tyrosine-phosphorylated protein 1) (CAT-1) (CAT1) (G protein-coupled receptor kinase-interactor 1) (GRK-interacting protein 1) (p95-APP1),FUNCTION: GTPase-activating protein for ADP ribosylation factor family members, including ARF1. Multidomain scaffold protein that interacts with numerous proteins and therefore participates in many cellular functions, including receptor internalization, focal adhesion remodeling, and signaling by both G protein-coupled receptors and tyrosine kinase receptors (By similarity). Through PAK1 activation, positively regulates microtubule nucleation during interphase (PubMed:27012601). Plays a role in the regulation of cytokinesis, for this function, may act in a pathway also involving ENTR1 and PTPN13 (PubMed:23108400). May promote cell motility both by regulating focal complex dynamics and by local activation of RAC1 (PubMed:10938112, PubMed:11896197). May act as scaffold for MAPK1/3 signal transduction in focal adhesions. Recruits MAPK1/3/ERK1/2 to focal adhesions after EGF stimulation via a Src-dependent pathway, hence stimulating cell migration (PubMed:15923189). Plays a role in brain development and function. Involved in the regulation of spine density and synaptic plasticity that is required for processes involved in learning (By similarity). Plays an important role in dendritic spine morphogenesis and synapse formation (PubMed:12695502, PubMed:15800193). In hippocampal neurons, recruits guanine nucleotide exchange factors (GEFs), such as ARHGEF7/beta-PIX, to the synaptic membrane. These in turn locally activate RAC1, which is an essential step for spine morphogenesis and synapse formation (PubMed:12695502). May contribute to the organization of presynaptic active zones through oligomerization and formation of a Piccolo/PCLO-based protein network, which</p>

## Target Details

includes ARHGEF7/beta-PIX and FAK1 (By similarity). In neurons, through its interaction with liprin-alpha family members, may be required for AMPA receptor (GRIA2/3) proper targeting to the cell membrane (By similarity). In complex with GABA(A) receptors and ARHGEF7, plays a crucial role in regulating GABA(A) receptor synaptic stability, maintaining GPHN/gephyrin scaffolds and hence GABAergic inhibitory synaptic transmission, by locally coordinating RAC1 and PAK1 downstream effector activity, leading to F-actin stabilization (PubMed:25284783). May also be important for RAC1 downstream signaling pathway through PAK3 and regulation of neuronal inhibitory transmission at presynaptic input (By similarity). Required for successful bone regeneration during fracture healing (By similarity). The function in intramembranous ossification may, at least partly, exerted by macrophages in which GIT1 is a key negative regulator of redox homeostasis, IL1B production, and glycolysis, acting through the ERK1/2/NRF2/NFE2L2 axis (By similarity). May play a role in angiogenesis during fracture healing (By similarity). In this process, may regulate activation of the canonical NF-kappa-B signal in bone mesenchymal stem cells by enhancing the interaction between NEMO and 'Lys-63'-ubiquitinated RIPK1/RIP1, eventually leading to enhanced production of VEGFA and others angiogenic factors (PubMed:31502302). Essential for VEGF signaling through the activation of phospholipase C-gamma and ERK1/2, hence may control endothelial cell proliferation and angiogenesis (PubMed:19273721). {ECO:0000250|UniProtKB:Q68FF6, ECO:0000250|UniProtKB:Q9Z272, ECO:0000269|PubMed:10938112, ECO:0000269|PubMed:11896197, ECO:0000269|PubMed:12695502, ECO:0000269|PubMed:15800193, ECO:0000269|PubMed:15923189, ECO:0000269|PubMed:19273721, ECO:0000269|PubMed:23108400, ECO:0000269|PubMed:25284783, ECO:0000269|PubMed:27012601, ECO:0000269|PubMed:31502302}.

Molecular Weight: 84.3 kDa

UniProt: [Q9Y2X7](#)

## 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.

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## Application Details

modifications.

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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)

## Images



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