Datasheet for ABIN7564007

GIT1 Protein (GIT1) (AA 1-770) (His tag)

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Overview

Quantity:	1 mg
Target:	GIT1
Protein Characteristics:	AA 1-770
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GIT1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Git1 Protein expressed in mammalian cells.
Sequence:	MSRKGPRAEV CADCSAPDPG WASISRGVLV CDECCSVHRS LGRHISIVKH LRHSAWPPTL LQMVHTLASN GANSIWEHSL LDPAQVQSGR RKANPQDKVH PIKSEFIRAK YQMLAFVHKL PCRDDDGVTA KDLSKQLHSS VRTGNLETCL RLLSLGAQAN FFHPEKGTTP LHVAAKAGQT LQAELLVVYG ADPGSPDVNG RTPIDYARQA GHHELAERLV ECQYELTDRL AFYLCGRKPD HKNGHYIIPQ MADRSRQKCM SQSLDLSELA KAAKKKLQAL SNRLFEELAM DVYDEVDRRE NDAVWLATQN HSTLVTERSA VPFLPVNPEY SATRNQGRQK LARFNAREFA TLIIDILSEA KRRQQGKSLS SPTDNLELSA RSQSELDDQH DYDSVASDED TDQEPLPSAG ATRNNRARSM DSSDLSDGAV TLQEYLELKK ALATSEAKVQ QLMKVNSSLS DELRRLQREI HKLQAENLQL RQPPGPVPPP SLPSERAEHT LMGPGGSTHR RDRQAFSMYE PGSALKPFGG TPGDELATRL QPFHSTELED DAIYSVHVPA GLYRIRKGVS ASSVPFTPSS PLLSCSQEGS RHASKLSRHG SGADSDYENT QSGDPLLGLE GKRFLELSKE DELHPELESL DGDLDPGLPS TEDVILKTEQ VTKNIQELLR AAQEFKHDSF VPCSEKIHLA VTEMASLFPK RPALEPVRSS LRLLNASAYR

Product Details

	LQSECRKTVP PEPGAPVDFQ LLTQQVIQCA YDIAKAAKQL VTITTREKKQ **Sequence without tag. The proposed Purification-Tag is based on experiences 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	GIT1
Alternative Name:	Git1 (GIT1 Products)
Background:	ARF GTPase-activating protein GIT1 (ARF GAP GIT1) (G protein-coupled receptor kinase-interactor 1) (GRK-interacting protein 1),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. Plays a role in the regulation of cytokinesis, for this

function, may act in a pathway also involving ENTR1 and PTPN13 (By similarity). May promote cell motility both by regulating focal complex dynamics and by the activation of RAC1 (By similarity). May act as scaffold for MAPK1/3 signal transduction, recruiting MAPK1/3 to focal adhesions after EGF stimulation via a Src-dependent pathway, hence stimulating cell migration (By similarity). Plays a role in brain development and function (PubMed:25792865, PubMed:33010377). Involved in the regulation of spine density and synaptic plasticity that is required for processes involved in learning (PubMed:20043896, PubMed:29554125). Plays an important role in dendritic spine morphogenesis and synapse formation (PubMed:12695502). 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 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 (By similarity). May also be important for RAC1 downstream signaling pathway through PAK3 and regulation of neuronal inhibitory transmission at presynaptic input (PubMed:21499268). Required for successful bone regeneration during fracture healing (PubMed:25138700, PubMed:24586541, PubMed:32460388). 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 (PubMed:32460388). May play a role in angiogenesis during fracture healing (PubMed:24586541, PubMed:31502302). 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 (By similarity). 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:Q9Y2X7, ECO:0000250|UniProtKB:Q9Z272, ECO:0000269|PubMed:12695502, ECO:0000269|PubMed:19273721, ECO:0000269|PubMed:20043896, ECO:0000269|PubMed:21499268, ECO:0000269|PubMed:24586541, ECO:0000269|PubMed:25138700, ECO:0000269|PubMed:25792865,

Target Details

	ECO:0000269|PubMed:29554125, ECO:0000269|PubMed:31502302, ECO:0000269|PubMed:32460388, ECO:0000269|PubMed:33010377}.
Molecular Weight:	85.3 kDa
UniProt:	Q68FF6

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months

