Datasheet for ABIN3092158

DIAPH1 Protein (AA 1-1272) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	DIAPH1
Protein Characteristics:	AA 1-1272
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DIAPH1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MEPPGGSLGP GRGTRDKKKG RSPDELPSAG GDGGKSKKFT LKRLMADELE RFTSMRIKKE KEKPNSAHRN SSASYGDDPT AQSLQDVSDE QVLVLFEQML LDMNLNEEKQ QPLREKDIII KREMVSQYLY TSKAGMSQKE SSKSAMMYIQ ELRSGLRDMP LLSCLESLRV SLNNNPVSWV QTFGAEGLAS LLDILKRLHD EKEETAGSYD SRNKHEIIRC LKAFMNNKFG IKTMLETEEG ILLLVRAMDP AVPNMMIDAA KLLSALCILP QPEDMNERVL EAMTERAEMD EVERFQPLLD GLKSGTTIAL KVGCLQLINA LITPAEELDF RVHIRSELMR LGLHQVLQDL REIENEDMRV QLNVFDEQGE EDSYDLKGRL DDIRMEMDDF NEVFQILLNT VKDSKAEPHF LSILQHLLLV RNDYEARPQY YKLIEECISQ IVLHKNGADP DFKCRHLQIE IEGLIDQMID KTKVEKSEAK AAELEKKLDS ELTARHELQV EMKKMESDFE QKLQDLQGEK DALHSEKQQI ATEKQDLEAE VSQLTGEVAK LTKELEDAKK EMASLSAAAI TVPPSVPSRA PVPPAPPLPG DSGTIIPPPP APGDSTTPPP PPPPPPPPPP LPGGVCISSP PSLPGGTAIS PPPPLSGDAT IPPPPPLPEG VGIPSPSSLP GGTAIPPPPP LPGSARIPPP PPPLPGSAGI PPPPPPLPGE AGMPPPPPPL

	PGGPGIPPPP PFPGGPGIPP PPPGMGMPPP PPFGFGVPAA PVLPFGLTPK KLYKPEVQLR RPNWSKLVAE DLSQDCFWTK VKEDRFENNE LFAKLTLTFS AQTKTSKAKK DQEGGEEKKS VQKKKVKELK VLDSKTAQNL SIFLGSFRMP YQEIKNVILE VNEAVLTESM IQNLIKQMPE PEQLKMLSEL KDEYDDLAES EQFGVVMGTV PRLRPRLNAI LFKLQFSEQV ENIKPEIVSV TAACEELRKS ESFSNLLEIT LLVGNYMNAG SRNAGAFGFN ISFLCKLRDT KSTDQKMTLL HFLAELCEND YPDVLKFPDE LAHVEKASRV SAENLQKNLD QMKKQISDVE RDVQNFPAAT DEKDKFVEKM TSFVKDAQEQ YNKLRMMHSN METLYKELGE YFLFDPKKLS VEEFFMDLHN FRNMFLQAVK ENQKRRETEE KMRRAKLAKE KAEKERLEKQ QKREQLIDMN AEGDETGVMD SLLEALQSGA AFRRKRGPRQ ANRKAGCAVT SLLASELTKD DAMAAVPAKV SKNSETFPTI LEEAKELVGR AS **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Human DIAPH1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three

Product Details

	different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	DIAPH1
Alternative Name:	DIAPH1 (DIAPH1 Products)
Background:	Acts in a Rho-dependent manner to recruit PFY1 to the membrane. Required for the assembly of F-actin structures, such as actin cables and stress fibers. Nucleates actin filaments. Binds to the barbed end of the actin filament and slows down actin polymerization and depolymerization. Required for cytokinesis, and transcriptional activation of the serum response factor. DFR proteins couple Rho and Src tyrosine kinase during signaling and the regulation of actin dynamics. Functions as a scaffold protein for MAPRE1 and APC to stabilize microtubules and promote cell migration (By similarity). Has neurite outgrowth promoting activity (By similarity). In hear cells, it may play a role in the regulation of actin polymerization in hair cells. The MEMO1-RHOA-DIAPH1 signaling pathway plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. It controls the localization of APC and CLASP2 to the cell membrane, via the regulation of GSK3B activity. In turn, membrane-bound APC allows the localization of the MACF1 to the cell membrane, which is required for microtubule capture and stabilization. Plays a role in the regulation of cell morphology and cytoskeletal organization. Required in the control of cell shape (PubMed:20937854, PubMed:21834987). Plays a role in brain development (PubMed:24781755). {ECO:0000250|UniProtKB:O08808, ECO:0000269|PubMed:20937854, ECO:0000269|PubMed:21834987, ECO:0000269|PubMed:24781755}.
Molecular Weight:	142.3 kDa Including tag.
UniProt:	O60610
Pathways:	Sensory Perception of Sound

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 gurantee though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value 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:	Unlimited (if stored properly)

Images

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