Datasheet for ABIN3131645

HAP1 Protein (AA 1-628) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	HAP1
Protein Characteristics:	AA 1-628
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This HAP1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	MRPKEQVQSG AGDGTGSGDP AAGTPTTQPA VGPAPEPSAE PKPAPAQGTG SGQKSGSRTK TGSFCRSMII GDSDAPWTRY VFQGPYGPRA TGLGTGKAEG IWKTPAAYIG RRPGVSGPER AAFIRELQEA LCPNPPPTKK ITEDDVKVML YLLEEKERDL NTAARIGQSL VKQNSVLMEE NNKLETMLGS AREEILHLRK QVNLRDDLLQ LYSDSDDDDD EEDEEDEEEG EEEEREGQRD QDQQHDHPYG APKPHPKAET AHRCPQLETL QQKLRLLEEE NDHLREEASH LDNLEDEEQM LILECVEQFS EASQQMAELS EVLVLRLEGY ERQQKEITQL QAEITKLQQR CQSYGAQTEK LQQMLASEKG IHSESLRAGS YMQDYGSRPR DRQEDGKSHR QRSSMPAGSV THYGYSVPLD ALPSFPETLA EELRTSLRKF ITDPAYFMER RDTHCREGRK KEQRAMPPPP AQDLKPPEDF EAPEELVPEE ELGAIEEVGT AEDGQAEENE QASEETEAWE EVEPEVDETT RMNVVVSALE ASGLGPSHLD MKYVLQQLSN WQDAHSKRQQ KQKVVPKDSP TPQQQTNMGG GILEQQPRVP TQDSQRLEED RATHSPSARE EEGPSGAT **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. • Mouse Hap1 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 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:	HAP1
Alternative Name:	Hap1 (HAP1 Products)
Background:	Originally identified as neuronal protein that specifically associates with HTT/huntingtin and the binding is enhanced by an expanded polyglutamine repeat within HTT possibly affecting HAP1 interaction properties. Both HTT and HAP1 are involved in intracellular trafficking and HAP1 is proposed to link HTT to motor proteins and/or transport cargos. Seems to play a role in vesicular transport within neurons and axons such as from early endosomes to late endocytic compartments and to promote neurite outgrowth. The vesicular transport function via association with microtubule-dependent transporters can be attenuated by association with mutant HTT. Involved in the axonal transport of BDNF and its activity-dependent secretion, the function seems to involve HTT, DCTN1 and a complex with SORT1. Involved in APP trafficking and seems to faciltate APP anterograde transport and membrane insertion thereby possibly reducing processing into amyloid beta. Involved in delivery of gamma-aminobutyric acid (GABA(A)) receptors to synapses, the function is dependent on kinesin motor protein KIF5 and is disrupted by HTT with expanded polyglutamine repeat. Involved in regulation of autophagosome motility by promoting efficient retrograde axonal transport. Seems to be involved in regulation of membrane receptor recycling and degradation, and respective signal transduction, including GABA(A) receptors, tyrosine kinase receptors, EGFR, IP3 receptor and androgen receptor. Among others suggested to be involved in control of feeding behavior (involving hypothalamic GABA(A) receptors), cerebellar and brainstem development (involving AHI1 and NTRK1/TrkA), postnatal neurogenesis (involving hypothalamic NTRK2/TrkB regulating the number of Npyr1-expressing cells), and ITPR1/InsP3R1-mediated Ca(2+) release (involving HTT and possibly the effect of mutant HTT). Via association with DCTN1/dynactin p150-glued and HTT/huntingtin involved in cytoplasmic retention of REST in neurons. May be involved in ciliogenesiss, however, reports are conflicting: PubMed:21985783 reports that Hap1 is required for ciliogenesis in primary cortical neurons and proposes that HTT interacts with PCM1 through HAP1, PubMed:23532844 reports that mice with disrupted Hap1 display normal cilium formation and function. Involved in regulation of exocytosis. Isoform A but not isoform B seems to be involved in formation of cytoplasmic inclusion bodies (STBs). In case of anomalous expression of TBP, can sequester a subset of TBP into STBs, sequestration is enhanced by an expanded polyglutamine repeat within TBP. {ECO:0000269|PubMed:12890790, ECO:0000269|PubMed:15379999, ECO:0000269|PubMed:17868456, ECO:0000269|PubMed:18636121, ECO:0000269|PubMed:21985783, ECO:0000269|PubMed:24355921, ECO:0000269|PubMed:24366265, ECO:0000269|PubMed:24453320}.

Target Details

Molecular Weight:	71.1 kDa Including tag.
UniProt:	O35668
Pathways:	Cell RedoxHomeostasis, Smooth Muscle Cell Migration, Positive Regulation of Response to DNA Damage Stimulus

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:	Protein has not been tested for activity yet. 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)

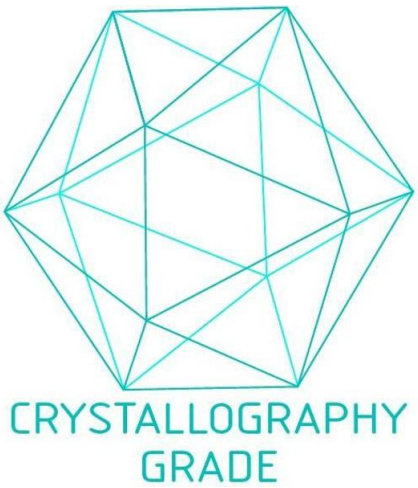

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process