Datasheet for ABIN3090073

BRD4 Protein (AA 1-1362) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	BRD4
Protein Characteristics:	AA 1-1362
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This BRD4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSAESGPGTR LRNLPVMGDG LETSQMSTTQ AQAQPQPANA ASTNPPPPET SNPNKPKRQT NQLQYLLRVV LKTLWKHQFA WPFQQPVDAV KLNLPDYYKI IKTPMDMGTI KKRLENNYYW NAQECIQDFN TMFTNCYIYN KPGDDIVLMA EALEKLFLQK INELPTEETE IMIVQAKGRG RGRKETGTAK PGVSTVPNTT QASTPPQTQT PQPNPPPVQA TPHPFPAVTP DLIVQTPVMT VVPPQPLQTP PPVPPQPQPP PAPAPQPVQS HPPIIAATPQ PVKTKKGVKR KADTTTPTTI DPIHEPPSLP PEPKTTKLGQ RRESSRPVKP PKKDVPDSQQ HPAPEKSSKV SEQLKCCSGI LKEMFAKKHA AYAWPFYKPV DVEALGLHDY CDIIKHPMDM STIKSKLEAR EYRDAQEFGA DVRLMFSNCY KYNPPDHEVV AMARKLQDVF EMRFAKMPDE PEEPVVAVSS PAVPPPTKVV APPSSSDSSS DSSSDSDSST DDSEEERAQR LAELQEQLKA VHEQLAALSQ PQQNKPKKKE KDKKEKKKEK HKRKEEVEEN KKSKAKEPPP KKTKKNNSSN SNVSKKEPAP MKSKPPPTYE SEEEDKCKPM SYEEKRQLSL DINKLPGEKL GRVVHIIQSR EPSLKNSNPD EIEIDFETLK PSTLRELERY VTSCLRKKRK PQAEKVDVIA GSSKMKGFSS SESESSSESS SSDSEDSETE

MAPKSKKKGH PGREQKKHHH HHHQQMQQAP APVPQQPPPP PQQPPPPPPP QQQQQPPPPP PPPSMPQQAA PAMKSSPPPF IATQVPVLEP QLPGSVFDPI GHFTQPILHL PQPELPPHLP QPPEHSTPPH LNQHAVVSPP ALHNALPQQP SRPSNRAAAL PPKPARPPAV SPALTQTPLL PQPPMAQPPQ VLLEDEEPPA PPLTSMQMQL YLQQLQKVQP PTPLLPSVKV QSQPPPPLPP PPHPSVQQQL QQQPPPPPPP QPQPPPQQQH QPPPRPVHLQ PMQFSTHIQQ PPPPQGQQPP HPPPGQQPPP PQPAKPQQVI QHHHSPRHHK SDPYSTGHLR EAPSPLMIHS PQMSQFQSLT HQSPPQQNVQ PKKQELRAAS VVQPQPLVVV KEEKIHSPII RSEPFSPSLR PEPPKHPESI KAPVHLPQRP EMKPVDVGRP VIRPPEQNAP PPGAPDKDKQ KQEPKTPVAP KKDLKIKNMG SWASLVQKHP TTPSSTAKSS SDSFEQFRRA AREKEEREKA LKAQAEHAEK EKERLRQERM RSREDEDALE QARRAHEEAR RRQEQQQQQR QEQQQQQQQQ AAAVAAAATP QAQSSQPQSM LDQQRELARK REQERRRREA MAATIDMNFQ SDLLSIFEEN LF

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

Product Details

	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 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:	BRD4
Alternative Name:	BRD4 (BRD4 Products)
Background:	Bromodomain-containing protein 4 (Protein HUNK1),FUNCTION: Chromatin reader protein that recognizes and binds acetylated histones and plays a key role in transmission of epigenetic memory across cell divisions and transcription regulation (PubMed:23086925, PubMed:23317504, PubMed:20871596, PubMed:29176719). Remains associated with acetylated chromatin throughout the entire cell cycle and provides epigenetic memory for postmitotic G1 gene transcription by preserving acetylated chromatin status and maintaining high-order chromatin structure (PubMed:23589332, PubMed:23317504, PubMed:22334664). During interphase, plays a key role in regulating the transcription of signal-inducible genes by associating with the P-TEFb complex and recruiting it to promoters (PubMed:23589332, PubMed:19596240, PubMed:16109377, PubMed:16109376, PubMed:24360279). Also recruits P-TEFb complex to distal enhancers, so called anti-pause enhancers in collaboration with

Target Details

	JMJD6 (PubMed:23589332, PubMed:19596240, PubMed:16109377, PubMed:16109376, PubMed:24360279). BRD4 and JMJD6 are required to form the transcriptionally active P-TEFb complex by displacing negative regulators such as HEXIM1 and 7SKsnRNA complex from P-TEFb, thereby transforming it into an active form that can then phosphorylate the C-terminal domain (CTD) of RNA polymerase II (PubMed:23589332, PubMed:19596240, PubMed:16109377, PubMed:16109376, PubMed:24360279). Regulates differentiation of naive CD4(+) T-cells into T-helper Th17 by promoting recruitment of P-TEFb to promoters (By similarity). Promotes phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II (PubMed:23086925). According to a report, directly acts as an atypical protein kinase and mediates phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II, these data however need additional evidences in vivo (PubMed:22509028). In addition to acetylated histones, also recognizes and binds acetylated RELA, leading to further recruitment of the P-TEFb complex and subsequent activation of NF-kappa-B (PubMed:19103749). Also acts as a regulator of p53/TP53-mediated transcription: following phosphorylation by CK2, recruited to p53/TP53 specific target promoters (PubMed:23317504). {ECO:0000250|UniProtKB:Q9ESU6, ECO:0000269|PubMed:16109376, ECO:0000269|PubMed:16109377, ECO:0000269|PubMed:19103749, ECO:0000269|PubMed:19596240, ECO:0000269|PubMed:22334664, ECO:0000269|PubMed:22509028, ECO:0000269|PubMed:23086925, ECO:0000269|PubMed:23317504, ECO:0000269|PubMed:23589332, ECO:0000269|PubMed:24360279, ECO:0000269|PubMed:29176719}., FUNCTION: [Isoform B]: Acts as a chromatin insulator in the DNA damage response pathway. Inhibits DNA damage response signaling by recruiting the condensin-2 complex to acetylated histones, leading to chromatin structure remodeling, insulating the region from DNA damage response by limiting spreading of histone H2AX/H2A.x phosphorylation. {ECO:0000269|PubMed:23728299}.
Molecular Weight:	152.2 kDa
UniProt:	O60885
Pathways:	Chromatin Binding, SARS-CoV-2 Protein Interactome

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.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

Application Details

	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!
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

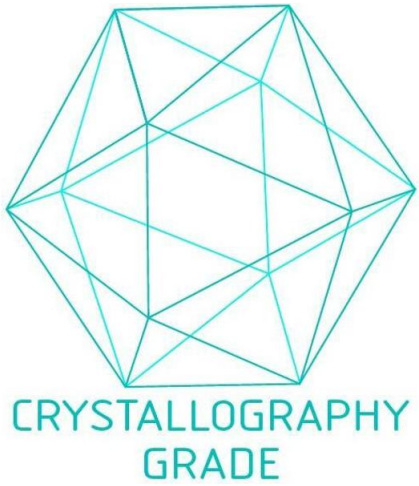

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process