

Datasheet for ABIN3090073 BRD4 Protein (AA 1-1362) (His tag)



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Overview

Quantity:	1 mg
Target:	BRD4
Protein Characteristics:	AA 1-1362
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This BRD4 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	MSAESGPGTR LRNLPMGDG LETSQMSTTQ AQAQPQANA ASTNPPPPET SNPNKPKRQT NQLQYLLRVV LKTLWKHQFA WPFQQPVDV KLNLPDYYKI IKTPMDMGTI KKRENNYYW NAQECIQDFN TMFTNCYIYN KPGDDIVLMA EALEKLFLQK INELPTEETE IMIVQAKGRG RGRKETGTAK PGVSTVPNTT QASTPPQTQT PQPNPPPVQA TPHPFPAVTP DLIVQTPVMT VPPPQLQTP PPVPPQPQPP PAPAPQPVQS HPPIAATPQ PVKTKKGVKR KADTTTPTTI DPIHEPPSLP PEPKTTKLGQ RRESSRPVKP PKKDVPSQSQ HPAPEKSSKV SEQLKCCSGI LKEMFAKKHA AYAWPFYKPV DVEALGLHDY CDIHKPMMDM STIKSKLEAR EYRDAQEFGA DVRLMFSNCY KYNPPDHEVV AMARKLQDVF EMRFAKMPDE PEEPVVAVSS PAVPPPTKV APPSSSDSSS DSSSDSDSST DDSEERAQR LAELQEQLKA VHEQLAALSQ PQQNKPKKKE KDKKEKKKEK HKRKEEVEEN KSKAKEPPP KKTCKNNSSN SNVSKKEPAP MKSKPPPTYE SEEDKCKPM SYEEKRQLSL DINKLPGEKL GRVVHIIQSR EPSLKNSNPDI EIDFETLK PSTLRELERY VTSLRKKRK PQAQKVDVIA GSSKMKGFS SESESSSESS SSDSESETE
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MAPKSKKKGH PGREQKKHHH HHHQMQQAP APVPQQPPPP PQQPPPPPP QQQQPPPPPP
PPPSMPQQAA PAMKSSPPPF IATQVPVLEP QLPGSVFDPI GHFTQPILHL PQPELPPHL
QPPEHSTPPH LNQHAVVSPP ALHNALPQQP SRPSNRAAAL PPKPARPPAV SPALTQTPLL
PQPPMAQPPQ VLLEDEEPPA PPLTSMQML YLQQLQKVQP PTLLPSVKV QSQPPPLPP
PPHPSVQQQL QQQPPPPPP QPQPPQQH QPPRPVHLQ PMQFSTHIQ PPPPQGQQP
HPPPGQQPP PQPAKPQVI QHHHSPRHHK SDPYSTGHLR EAPSPLMIHS PQMSQFQSLT
HQSPQQNVQ PKKQELRAAS VVQPQLVVV KEEKIHSP II RSEPFSPSLR PEPKHPESI
KAPVHLPQRP EMKPVDVGRP VIRPPEQNAP PPGAPDKDKQ KQEPKTPVAP KKD LKIKNMG
SWASLVQKHP TTPSSTAKSS SDSFEQFRR AREKEEREKA LKAQAEHA EKERLRQERM
RSREDEDALE QARRAHEEAR RRQEQQQQR QEQQQQQQQ AA AVAAATP QAQSSQPQSM
LDQRELARK REQERRREA MAATIDMNFQ SDLLSIFEEN LF

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 BRD4 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 receipt 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:

Product Details

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: BRD4

Alternative Name: BRD4 ([BRD4 Products](#))

Background: 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. 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. 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: BRD4 is 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. Promotes phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II. 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. Also acts as a regulator of p53/TP53-mediated transcription: following phosphorylation by CK2, recruited to p53/TP53 specific target promoters. {ECO:0000269|PubMed:22509028},. 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

Target Details

	H2AFX/H2A.x phosphorylation.
Molecular Weight:	153.2 kDa Including tag.
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:	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