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Datasheet for ABIN3132343  
**ABL1 Protein (AA 2-1123) (His tag)**

### Overview

Quantity:	1 mg
Target:	ABL1
Protein Characteristics:	AA 2-1123
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ABL1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), ELISA, Western Blotting (WB), Crystallization (Crys)

### Product Details

Sequence: LEICLKLVGC KSKKGLSSSS SCYLEEALQR PVASDFEPQG LSEAARWNSK ENLLAGPSEN  
DPNLFVALYD FVASGDNTLS ITKGEKLRVL GYNHNGEWCE AQTKNQGQWV PSNYITPVNS  
LEKHSWYHGP VSRNAEYLL SSGINGSFLV RESESSPGQR SISLRYEGRV YHYRINTASD  
GKLYVSSESR FNTLAELVHH HSTVADGLIT TLHYPAPKRN KPTIYGVSPN YDKWEMERTD  
ITMKHKLGGG QYGEVYEGVW KKYSLTVAVK TLKEDTMEVE EFLKEAAVMK EIKHPNLVQL  
LGVCTREPPF YIITEFMTYG NLLDYLRECN RQEVSAVLL YMATQISSAM EYLEKKNFIH  
RDLAARNCLV GENHLVKVAD FGLSRLMTGD TYTAHAGAKF PIKWTAPESL AYNKFSIKSD  
VWAFGVLLWE IATYGMSPYP GIDLSQVYEL LEKDYRMERP EGCPEKVYEL MRACWQWNPS  
DRPSFAEIHQ AFETMFQESS ISDEVEKELG KRGTRGGAGS MLQAPELPTK TRTCRRAEQ  
KDAPDTPPELL HTKGLGESDA LDSEPAVSPL LPRKERGPPD GSLNEDERLL PRDRKTNLFS  
ALIKKKKKMA PTPPKRSSSF REMDGQPD RR GASEDDSREL CNGPPALTSD AAEPTKSPKA  
SNGAGVPNGA FREPGNSGFR SPMHWKKSST LTGSRLAAAE EESGMSSSKR FLRSCSASCM

PHGARDTEWR SVTLPRDLPS AGKQFDSSTF GGHKSEKPAL PRKRTSESRS EQVAKSTAMP  
PPRLVKKNEE AAEEGFKDTE SSPGSSPPSL TPKLLRRQVT ASPSSGLSHK EEATKGSASG  
MGTPATAEPA PPSNKVGLSK ASSEEMRVRR HKHSSSESPGR DKGRLAKLKP APPPPACTG  
KAGKPAQSPS QEAGEAGGPT KTKCTSLAMD AVNTDPTKAG PPGEGLRKPV PPSVPKPQST  
AKPPGTPTSP VSTPSTAPAP SPLAGDQQPS SAAFIPLIST RVSLRKTRQP PERIASGTIT  
KGVVLDSTEA LCLAISRNSE QMASHSAVLE AGKNLYTFCV SYVDSIQQMR NKFAFREAIN  
KLESNLRELQ ICPATASSGP AATQDFSKLL SSVKEISDIV RR

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Abl1 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.

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### 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

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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

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Target: ABL1

Alternative Name: Abl1 ([ABL1 Products](#))

Background: Non-receptor tyrosine-protein kinase that plays a role in many key processes linked to cell growth and survival such as cytoskeleton remodeling in response to extracellular stimuli, cell motility and adhesion, receptor endocytosis, autophagy, DNA damage response and apoptosis. Coordinates actin remodeling through tyrosine phosphorylation of proteins controlling cytoskeleton dynamics like WASF3 (involved in branch formation), ANXA1 (involved in membrane anchoring), DBN1, DBNL, CTTN, RAPH1 and ENAH (involved in signaling), or MAPT and PXN (microtubule-binding proteins). Phosphorylation of WASF3 is critical for the stimulation of lamellipodia formation and cell migration. Involved in the regulation of cell adhesion and motility through phosphorylation of key regulators of these processes such as BCAR1, CRK, CRKL, DOK1, EFS or NEDD9. Phosphorylates multiple receptor tyrosine kinases and more particularly promotes endocytosis of EGFR, facilitates the formation of neuromuscular synapses through MUSK, inhibits PDGFRB-mediated chemotaxis and modulates the endocytosis of activated B-cell receptor complexes. Other substrates which are involved in endocytosis regulation are the caveolin (CAV1) and RIN1. Moreover, ABL1 regulates the CBL family of ubiquitin ligases that drive receptor down-regulation and actin remodeling. Phosphorylation of CBL leads to increased EGFR stability. Involved in late-stage autophagy by regulating positively the trafficking and function of lysosomal components. ABL1 targets to mitochondria in response to oxidative stress and thereby mediates mitochondrial dysfunction and cell death. ABL1 is also translocated in the nucleus where it has DNA-binding activity and is involved in DNA-damage response and apoptosis. Many substrates are known mediators of DNA repair: DDB1, DDB2, ERCC3, ERCC6, RAD9A, RAD51, RAD52 or WRN. Activates the proapoptotic pathway when the DNA damage is too severe to be repaired. Phosphorylates TP73, a primary regulator for this type of damage-induced apoptosis. Phosphorylates the

## Target Details

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caspase CASP9 on 'Tyr-191' and regulates its processing in the apoptotic response to DNA damage. Phosphorylates PSMA7 that leads to an inhibition of proteasomal activity and cell cycle transition blocks. {ECO:0000269|PubMed:11279004, ECO:0000269|PubMed:11279131, ECO:0000269|PubMed:11350980, ECO:0000269|PubMed:12107171, ECO:0000269|PubMed:12748290, ECO:0000269|PubMed:14993293, ECO:0000269|PubMed:19878872, ECO:0000269|PubMed:19903482, ECO:0000269|PubMed:7780740, ECO:0000269|PubMed:8194526, ECO:0000269|PubMed:9109492}.

Molecular Weight: 123.5 kDa Including tag.

UniProt: [P00520](#)

Pathways: [Apoptosis](#), [Regulation of Muscle Cell Differentiation](#), [Platelet-derived growth Factor Receptor Signaling](#), [Lipid Metabolism](#)

## Application Details

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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: 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

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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)