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## BRCAA1 Protein (AA 1-1312) (Strep Tag)



#### Overview

Quantity:	1 mg
Target:	BRCAA1 (ARID4B)
Protein Characteristics:	AA 1-1312
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This BRCAA1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### **Product Details**

Sequence:

MKALDEPPYL TVGTDVSAKY RGAFCEAKIK TAKRLVKVKV TFRHDSSTVE VQDDHIKGPL
KVGAIVEVKN LDGAYQEAVI NKLTDASWYT VVFDDGDEKT LRRSSLCLKG ERHFAESETL
DQLPLTNPEH FGTPVIGKKT NRGRRSNHIP EEESSSSSSD EDEDDRKQID ELLGKVVCVD
YISLDKKKAL WFPALVVCPD CSDEIAVKKD NILVRSFKDG KFTSVPRKDV HEITSDTAPK
PDAVLKQAFE QALEFHKSRT IPANWKTELK EDSSSSEAEE EEEEEDDEKE KEDNSSEEEE
EIEPFPEERE NFLQQLYKFM EDRGTPINKR PVLGYRNLNL FKLFRLVHKL GGFDNIESGA
VWKQVYQDLG IPVLNSAAGY NVKCAYKKYL YGFEEYCRSA NIEFQMALPE KVVNKQCKEC
ENVKEIKVKE ENETEIKEIK MEEERNIIPR EEKPIEDEIE RKENIKPSLG SKKNLLESIP THSDQEKEVN
IKKPEDNENL DDKDDDTTRV DESLNIKVEA EEEKAKSGDE TNKEEDEDDE EAEEEEEEE
EEEDEDDDDN NEEEEFECYP PGMKVQVRYG RGKNQKMYEA SIKDSDVEGG EVLYLVHYCG
WNVRYDEWIK ADKIVRPADK NVPKIKHRKK IKNKLDKEKD KDEKYSPKNC KLRRLSKPPF
QTNPSPEMVS KLDLTDAKNS DTAHIKSIEI TSILNGLQAS ESSAEDSEQE DERGAQDMDN

NGKEESKIDH LTNNRNDLIS KEEQNSSSLL EENKVHADLV ISKPVSKSPE RLRKDIEVLS
EDTDYEEDEV TKKRKDVKKD TTDKSSKPQI KRGKRRYCNT EECLKTGSPG KKEEKAKNKE
SLCMENSSNS SSDEDEEETK AKMTPTKKYN GLEEKRKSLR TTGFYSGFSE VAEKRIKLLN
NSDERLQNSR AKDRKDVWSS IQGQWPKKTL KELFSDSDTE AAASPPHPAP EEGVAEESLQ
TVAEEESCSP SVELEKPPPV NVDSKPIEEK TVEVNDRKAE FPSSGSNSVL NTPPTTPESP
SSVTVTEGSR QQSSVTVSEP LAPNQEEVRS IKSETDSTIE VDSVAGELQD LQSEGNSSPA
GFDASVSSSS SNQPEPEHPE KACTGQKRVK DAQGGGSSSK KQKRSHKATV VNNKKKGKGT
NSSDSEELSA GESITKSQPV KSVSTGMKSH STKSPARTQS PGKCGKNGDK DPDLKEPSNR
LPKVYKWSFQ MSDLENMTSA ERITILQEKL QEIRKHYLSL KSEVASIDRR RKRLKKKERE
SAATSSSSSS PSSSSITAAV MLTLAEPSMS SASQNGMSVE CR

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 posttranslational 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!

#### 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:

BRCAA1 (ARID4B)

Alternative Name:

ARID4B (ARID4B Products)

Background:

AT-rich interactive domain-containing protein 4B (ARID domain-containing protein 4B) (180 kDa Sin3-associated polypeptide) (Sin3-associated polypeptide p180) (Breast cancer-associated antigen BRCAA1) (Histone deacetylase complex subunit SAP180) (Retinoblastoma-binding protein 1-like 1),FUNCTION: Acts as a transcriptional repressor (PubMed:12724404). May function in the assembly and/or enzymatic activity of the Sin3A corepressor complex or in mediating interactions between the complex and other regulatory complexes (PubMed:12724404). Plays a role in the regulation of epigenetic modifications at the PWS/AS imprinting center near the SNRPN promoter, where it might function as part of a complex with RB1 and ARID4A. Involved in spermatogenesis, together with ARID4A, where it functions as a transcriptional coactivator for AR (androgen receptor) and enhances expression of genes required for sperm maturation. Regulates expression of the tight junction protein CLDN3 in the

## Target Details

	testis, which is important for integrity of the blood-testis barrier. Plays a role in myeloid homeostasis where it regulates the histone methylation state of bone marrow cells and expression of various genes involved in hematopoiesis. May function as a leukemia suppressor (By similarity). {ECO:0000250 UniProtKB:A2CG63, ECO:0000269 PubMed:12724404}.
Molecular Weight:	147.8 kDa
UniProt:	Q4LE39
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 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:  Buffer:	Liquid  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)