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Datasheet for ABIN3092566

FANCD2 Protein (AA 1-1451) (Strep Tag)

1 Image

Overview

Quantity:	1 mg
Target:	FANCD2
Protein Characteristics:	AA 1-1451
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This FANCD2 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MVSKRRLSKS EDKESLTEDA SKTRKQPLSK KTKKSHIANE VEENDSIFVK LLKISGIILK
 TGESQNQLAV DQIAFQKKLF QTLRRHPSYP KIIIEFVSGL ESYIEDEDSF RNCLLSCERL
 QDEEASMGAS YSKSLIKLLL GIDILQPAII KTLFEKLPEY FFKNSDEI NIPRLIVSQL
 KWLDRVVDGK DLTTKIMQLI SIAPENLQHD IITSLPEILG DSQHADVGE LSDLLIENTS
 LTVPILDVLS SLRLDPNLLL KVRQLVMDKL SSIRLEDLPV IIKFILHSVT AMDTLEWISE
 LREKLDLQHC VLPSRLQASQ VKLKSNGRAS SSGNQESSGQ SCIIILFDVI KSAIRYEKTI
 SEAWIKAIEN TASVSEHKVF DLVMLFIIYS TNTQTKKYID RVLNRKIRSG CIQEQLLQST
 FSVHYLVVKD MCSSILSLAQ SLLHSLDQSI ISFGSLLYKY AFKFFDITYCQ QEVVGLVTH
 ICSGNEAEVD TALDVLELV VLNPSAMMMN AVFVKGILDY LDNISPQIR KLFYVLSTLA
 FSKQNEASSH IQDDMHLVIR KQLSSTVFKY KLIGIIGAVT MAGIMAADRS ESPSLTQERA
 NLSDEQCTQV TSLQLVHSC SEQSPQASAL YYDEFANLIQ HEKLDPKALE WVGHTICNDF
 QDAFVVDSCV VPEGDFPPV KALYGLEEYD TQDGIANLL PLLFSQDFAK DGGPVTSSQES

GQKLVSPCL APYFRLLRLC VERQHNGNLE EIDGLDCPI FLTDLEPGEK LESMSAKERS
FMCSLIFLTL NWFREIVNAF CQETSPEMKG KVLTRLKHIV ELQIILEKYL AVTPDYVPPL
GNFDVETLDI TPHTVTAISA KIRKKGKIER KQKTDGSKTS SSDDLSEEKN SECPTPSHR
GQLNKEFTGK EEKTSLLLHN SHAFFRELDI EVFSILHCGL VTKFILDTEM HTEATEVVQL
GPPELLFLE DLSQKLESML TPPIARRVPF LKNKGSRNIG FSHLQQRSAQ EIVHCVFQLL
TPMCNHLENI HNYFQCLAAE NHGVVDGPGV KVQEYHIMSS CYRLLQIFH GLFAWSGFSQ
PENQNLLYSA LHVLSRLKQ GEHSQPLEEL LSQSVHYLQN FHQSIPSFQC ALYLIRLLMV
ILEKSTASQA NKEKIASLAR QFLCRVWPSG DKEKSNISND QLHALLCIYL EHTESILKAI
EEIAGVGVPE LINSKPDASS STFPTLRHT FVFFRVMMA ELEKTVKKIE PGTAADSQQI
HEEKLLYWNM AVRDFSILIN LIKVFDSHPV LHVCLKYGRL FVEAFLKQCM PLLDFSFRKH
REDVLSLLET FQLDTRLLHH LCGHSKIHQD TRLTQHVPLL KKTLELLVCR VKAMLTNNC
REAFWLGNLK NRDLQGEEIK SQNSQESTAD ESEDDMSSQA SKSKATEDGE EDEVSAGEKE
QDSDESYDDS D

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

Product Details

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:

FANCD2

Alternative Name:

FANCD2 ([FANCD2 Products](#))

Background:

Fanconi anemia group D2 protein (Protein FANCD2),FUNCTION: Required for maintenance of chromosomal stability. Promotes accurate and efficient pairing of homologs during meiosis. Involved in the repair of DNA double-strand breaks, both by homologous recombination and single-strand annealing. May participate in S phase and G2 phase checkpoint activation upon DNA damage. Plays a role in preventing breakage and loss of missegregating chromatin at the end of cell division, particularly after replication stress. Required for the targeting, or stabilization, of BLM to non-centromeric abnormal structures induced by replicative stress. Promotes BRCA2/FANCD1 loading onto damaged chromatin. May also be involved in B-cell

Target Details

immunoglobulin isotype switching. {ECO:0000269|PubMed:11239453, ECO:0000269|PubMed:11239454, ECO:0000269|PubMed:12086603, ECO:0000269|PubMed:12239151, ECO:0000269|PubMed:14517836, ECO:0000269|PubMed:15115758, ECO:0000269|PubMed:15314022, ECO:0000269|PubMed:15377654, ECO:0000269|PubMed:15454491, ECO:0000269|PubMed:15650050, ECO:0000269|PubMed:15661754, ECO:0000269|PubMed:15671039, ECO:0000269|PubMed:19465921, ECO:0000269|PubMed:30335751}.

Molecular Weight: 164.1 kDa

UniProt: [Q9BXW9](#)

Pathways: [DNA Damage Repair](#)

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: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling

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