Datasheet for ABIN3096398

XPC Protein (AA 2-940) (His tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	XPC
Protein Characteristics:	AA 2-940
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This XPC protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	ARKRAAGGEP RGRELRSQKS KAKSKARREE EEEDAFEDEK PPKKSLLSKV SQGKRKRGCS HPGGSADGPA KKKVAKVTVK SENLKVIKDE ALSDGDDLRD FPSDLKKAHH LKRGATMNED SNEEEEESEN DWEEVEELSE PVLGDVREST AFSRSLLPVK PVEIEIETPE QAKTRERSEK IKLEFETYLR RAMKRFNKGV HEDTHKVHLL CLLANGFYRN NICSQPDLHA IGLSIIPARF TRVLPRDVDT YYLSNLVKWF IGTFTVNAEL SASEQDNLQT TLERRFAIYS ARDDEELVHI FLLILRALQL LTRLVLSLQP IPLKSATAKG KKPSKERLTA DPGGSSETSS QVLENHTKPK TSKGTKQEET FAKGTCRPSA KGKRNKGGRK KRSKPSSSEE DEGPGDKQEK ATQRRPHGRE RRVASRVSYK EESGSDEAGS GSDFELSSGE ASDPSDEDSE PGPPKQRKAP APQRTKAGSK SASRTHRGSH RKDPSLPAAS SSSSSSKRGK KMCSDGEKAE KRSIAGIDQW LEVFCEQEEK WVCVDCVHGV VGQPLTCYKY ATKPMTYVVG IDSDGWVRDV TQRYDPVWMT VTRKCRVDAE WWAETLRPYQ SPFMDREKKE DLEFQAKHMD QPLPTAIGLY KNHPLYALKR HLLKYEAIYP ETAAILGYCR GEAVYSRDCV HTLHSRDTWL KKARVVRLGE VPYKMVKGFS NRARKARLAE

	PQLREENDLG LFGYWQTEEY QPPVAVDGKV PRNEFGNVYL FLPSMMPIGC VQLNLPNLHR VARKLDIDCV QAITGFDFHG GYSHPVTDGY IVCEEFKDVL LTAWENEQAV IERKEKEKKE KRALGNWKLL AKGLLIRERL KRRYGPKSEA AAPHTDAGGG LSSDEEEGTS SQAEAARILA ASWPQNREDE EKQKLKGGPK KTKREKKAAA SHLFPFEQL **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 XPC 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 receival 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: 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.

Product Details

Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	XPC
Alternative Name:	XPC (XPC Products)
Background:	Involved in global genome nucleotide excision repair (GG-NER) by acting as damage sensing and DNA-binding factor component of the XPC complex. Has only a low DNA repair activity by itself which is stimulated by RAD23B and RAD23A. Has a preference to bind DNA containing a short single-stranded segment but not to damaged oligonucleotides. This feature is proposed to be related to a dynamic sensor function: XPC can rapidly screen duplex DNA for non-hydrogen-bonded bases by forming a transient nucleoprotein intermediate complex which matures into a stable recognition complex through an intrinsic single-stranded DNA-binding activity., The XPC complex is proposed to represent the first factor bound at the sites of DNA damage and together with other core recognition factors, XPA, RPA and the TFIIH complex, is part of the pre-incision (or initial recognition) complex. The XPC complex recognizes a wide spectrum of damaged DNA characterized by distortions of the DNA helix such as single-stranded loops, mismatched bubbles or single-stranded overhangs. The orientation of XPC complex binding appears to be crucial for inducing a productive NER. XPC complex is proposed to recognize and to interact with unpaired bases on the undamaged DNA strand which is followed by recruitment of the TFIIH complex and subsequent scanning for lesions in the opposite strand in a 5'-to-3' direction by the NER machinery. Cyclobutane pyrimidine dimers (CPDs) which are formed upon UV-induced DNA damage esacpe detection by the XPC complex due to a low degree of structural perurbation. Instead they are detected by the UV-DDB complex which in turn recruits and cooperates with the XPC complex in the respective DNA repair. In vitro, the XPC:RAD23B dimer is sufficient to initiate NER, it preferentially binds to cisplatin and UV-damaged double-stranded DNA and also binds to a variety of chemically and structurally diverse DNA adducts. XPC:RAD23B contacts DNA both 5' and 3' of a cisplatin lesion with a preference for the 5' side. XPC:RAD23B induces a bend in DNA upon binding. XPC:RAD23B stimulates the activity of DNA glycosylases TDG and SMUG1.
Molecular Weight:	106.8 kDa Including tag.
UniProt:	Q01831

Target Details

Pathways:	p53 Signaling, 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 gurantee 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)

Images

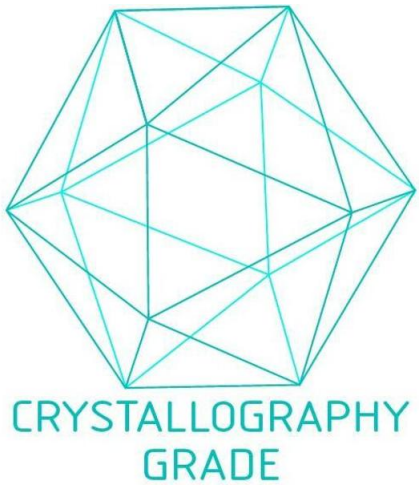

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process