Datasheet for ABIN3096413

XRCC6 Protein (AA 2-609) (His tag)

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Overview

Quantity:	1 mg
Target:	XRCC6
Protein Characteristics:	AA 2-609
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This XRCC6 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	SGWESYYKTE GDEEAEEEQE ENLEASGDYK YSGRDSLIFL VDASKAMFES QSEDELTPFD MSIQCIQSVY ISKIISSDRD LLAVVFYGTE KDKNSVNFKN IYVLQELDNP GAKRILELDQ FKGQQGQKRF QDMMGHGSDY SLSEVLWVCA NLFSDVQFKM SHKRIMLFTN EDNPHGNDSA KASRARTKAG DLRDTGIFLD LMHLKKPGGF DISLFYRDII SIAEDEDLRV HFEESSKLED LLRKVRAKET RKRALSRLKL KLNKDIVISV GIYNLVQKAL KPPPIKLYRE TNEPVKTKTR TFNTSTGGLL LPSDTKRSQI YGSRQIILEK EETEELKRFD DPGLMLMGFK PLVLLKKHHY LRPSLFVYPE ESLVIGSSTL FSALLIKCLE KEVAALCRYT PRRNIPPYFV ALVPQEEELD DQKIQVTPPG FQLVFLPFAD DKRKMPFTEK IMATPEQVGK MKAIVEKLRF TYRSDSFENP VLQQHFRNLE ALALDLMEPE QAVDLTLPKV EAMNKRLGSL VDEFKELVYP PDYNPEGKVT KRKHDNEGSG SKRPKVEYSE EELKTHISKG TLGKFTVPML KEACRAYGLK SGLKKQELLE ALTKHFQD **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 XRCC6 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.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	XRCC6
Alternative Name:	XRCC6 (XRCC6 Products)
Background:	Single-stranded DNA-dependent ATP-dependent helicase. Has a role in chromosome translocation. The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner. It works in the 3'-5' direction. Binding to DNA may be mediated by XRCC6. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. The XRCC5/6 dimer acts as regulatory subunit of the DNA-dependent protein kinase complex DNA-PK by increasing the affinity of the catalytic subunit PRKDC to DNA by 100-fold. The XRCC5/6 dimer is probably involved in stabilizing broken DNA ends and bringing them together. The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. Required for osteocalcin gene expression. Probably also acts as a 5'-deoxyribose-5-phosphate lyase (5'-dRP lyase), by catalyzing the beta-elimination of the 5' deoxyribose-5-phosphate at an abasic site near double-strand breaks. 5'-dRP lyase activity allows to 'clean' the termini of abasic sites, a class of nucleotide damage commonly associated with strand breaks, before such broken ends can be joined. The XRCC5/6 dimer together with APEX1 acts as a negative regulator of transcription. {ECO:0000269|PubMed:12145306, ECO:0000269|PubMed:20383123, ECO:0000269|PubMed:20493174, ECO:0000269|PubMed:2466842, ECO:0000269|PubMed:7957065, ECO:0000269|PubMed:8621488, ECO:0000269|PubMed:9742108}.
Molecular Weight:	70.7 kDa Including tag.
UniProt:	P12956
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 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)

