Datasheet for ABIN7549855

NHEJ1 Protein (AA 1-299) (His tag)

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Overview

Quantity:	1 mg
Target:	NHEJ1
Protein Characteristics:	AA 1-299
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NHEJ1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat NHEJ1 Protein expressed in mammalien cells.
Sequence:	MEELEQGLLM QPWAWLQLAE NSLLAKVFIT KQGYALLVSD LQQVWHEQVD TSVVSQRAKE LNKRLTAPPA AFLCHLDNLL RPLLKDAAHP SEATFSCDCV ADALILRVRS ELSGLPFYWN FHCMLASPSL VSQHLIRPLM GMSLALQCQV RELATLLHMK DLEIQDYQES GATLIRDRLK TEPFEENSFL EQFMIEKLPE ACSIGDGKPF VMNLQDLYMA VTTQEVQVGQ KHQGAGDPHT SNSASLQGID SQCVNQPEQL VSSAPTLSAP EKESTGTSGP LQRPQLSKVK RKKPRGLFS **Sequence without tag. The proposed Purification-Tag is based on experiences 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 to order protein - from design to production - by highly experienced protein experts.

Product Details

	• Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	NHEJ1
Alternative Name:	NHEJ1 (NHEJ1 Products)
Background:	Non-homologous end-joining factor 1 (Protein cernunnos) (XRCC4-like factor),FUNCTION: DNA repair protein involved in DNA non-homologous end joining (NHEJ), required for double-strand break (DSB) repair and V(D)J recombination (PubMed:16439204, PubMed:16439205, PubMed:17717001, PubMed:17317666, PubMed:17470781, PubMed:18644470, PubMed:20558749, PubMed:26100018, PubMed:18158905). Plays a key role in NHEJ by promoting the ligation of various mismatched and non-cohesive ends (PubMed:17717001, PubMed:17470781, PubMed:19056826). Together with PAXX, collaborates with DNA polymerase lambda (POLL) to promote joining of non-cohesive DNA ends (PubMed:30250067, PubMed:25670504). May act in concert with XRCC5-XRCC6 (Ku) to stimulate XRCC4-mediated joining of blunt ends and several types of mismatched ends that are non-complementary or partially complementary (PubMed:16439204, PubMed:16439205, PubMed:17317666, PubMed:17470781). In some studies, has been shown to associate with XRCC4 to form alternating helical filaments that bridge DNA and act like a bandage, holding together the broken DNA until it is repaired (PubMed:22228831, PubMed:26100018, PubMed:28500754, PubMed:27437582, PubMed:21775435, PubMed:22287571, PubMed:21768349). Alternatively,

Target Details

	it has also been shown that rather than forming filaments, a single NHEJ1 dimer interacts through both head domains with XRCC4 to promote the close alignment of DNA ends (By similarity). The XRCC4-NHEJ1/XLF subcomplex binds to the DNA fragments of a DSB in a highly diffusive manner and robustly bridges two independent DNA molecules, holding the broken DNA fragments in close proximity to one other (PubMed:28500754, PubMed:27437582). The mobility of the bridges ensures that the ends remain accessible for further processing by other repair factors (PubMed:27437582). Binds DNA in a length-dependent manner (PubMed:17317666, PubMed:18158905). {ECO:0000250|UniProtKB:A0A1L8ENT6, ECO:0000269|PubMed:16439204, ECO:0000269|PubMed:16439205, ECO:0000269|PubMed:17317666, ECO:0000269|PubMed:17470781, ECO:0000269|PubMed:17717001, ECO:0000269|PubMed:18158905, ECO:0000269|PubMed:18644470, ECO:0000269|PubMed:19056826, ECO:0000269|PubMed:20558749, ECO:0000269|PubMed:21768349, ECO:0000269|PubMed:21775435, ECO:0000269|PubMed:22228831, ECO:0000269|PubMed:22287571, ECO:0000269|PubMed:25670504, ECO:0000269|PubMed:26100018, ECO:0000269|PubMed:27437582, ECO:0000269|PubMed:28500754, ECO:0000269|PubMed:30250067}.
Molecular Weight:	33.3 kDa
UniProt:	Q9H9Q4
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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	12 months