Datasheet for ABIN7553715

LIG4 Protein (AA 1-911) (His tag)

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Overview

Quantity:	1 mg
Target:	LIG4
Protein Characteristics:	AA 1-911
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This LIG4 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant LIG4 Protein expressed in mammalian cells.
Sequence:	MAASQTSQTV ASHVPFADLC STLERIQKSK GRAEKIRHFR EFLDSWRKFH DALHKNHKDV TDSFYPAMRL ILPQLERERM AYGIKETMLA KLYIELLNLP RDGKDALKLL NYRTPTGTHG DAGDFAMIAY FVLKPRCLQK GSLTIQQVND LLDSIASNNS AKRKDLIKKS LLQLITQSSA LEQKWLIRMI IKDLKLGVSQ QTIFSVFHND AAELHNVTTD LEKVCRQLHD PSVGLSDISI TLFSAFKPML AAIADIEHIE KDMKHQSFYI ETKLDGERMQ MHKDGDVYKY FSRNGYNYTD QFGASPTEGS LTPFIHNAFK ADIQICILDG EMMAYNPNTQ TFMQKGTKFD IKRMVEDSDL QTCYCVFDVL MVNNKKLGHE TLRKRYEILS SIFTPIPGRI EIVQKTQAHT KNEVIDALNE AIDKREEGIM VKQPLSIYKP DKRGEGWLKI KPEYVSGLMD ELDILIVGGY WGKGSRGGMM SHFLCAVAEK PPPGEKPSVF HTLSRVGSGC TMKELYDLGL KLAKYWKPFH RKAPPSSILC GTEKPEVYIE PCNSVIVQIK AAEIVPSDMY KTGCTLRFPR IEKIRDDKEW HECMTLDDLE QLRGKASGKL ASKHLYIGGD DEPQEKKRKA APKMKKVIGI IEHLKAPNLT NVNKISNIFE DVEFCVMSGT DSQPKPDLEN RIAEFGGYIV QNPGPDTYCV IAGSENIRVK NIILSNKHDV

Product Details

	VKPAWLLECF KTKSFVPWQP RFMIHMCPST KEHFAREYDC YGDSYFIDTD LNQLKEVFSG IKNSNEQTPE EMASLIADLE YRYSWDCSPL SMFRRHTVYL DSYAVINDLS TKNEGTRLAI KALELRFHGA KVVSCLAEGV SHVIIGEDHS RVADFKAFRR TFKRKFKILK ESWVTDSIDK CELQEENQYL I **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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian 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, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	LIG4
Alternative Name:	LIG4 (LIG4 Products)
Background:	DNA ligase 4 (EC 6.5.1.1) (DNA ligase IV) (Polydeoxyribonucleotide synthase [ATP] 4),FUNCTION: DNA ligase involved in DNA non-homologous end joining (NHEJ), required for double-strand break (DSB) repair and V(D)J recombination (PubMed:8798671, PubMed:9242410, PubMed:9809069, PubMed:12517771, PubMed:17290226, PubMed:23523427, PubMed:29980672, PubMed:33586762). Catalyzes the NHEJ ligation step

Target Details

	of the broken DNA during DSB repair by resealing the DNA breaks after the gap filling is completed (PubMed:9242410, PubMed:9809069, PubMed:12517771, PubMed:17290226). Joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction (PubMed:9242410, PubMed:9809069, PubMed:12517771, PubMed:17290226). LIG4 is mechanistically flexible: it can ligate nicks as well as compatible DNA overhangs alone, while in the presence of XRCC4, it can ligate ends with 2-nucleotides (nt) microhomology and 1-nt gaps (PubMed:17290226). Forms a subcomplex with XRCC4, the LIG4-XRCC4 subcomplex is responsible for the NHEJ ligation step and XRCC4 enhances the joining activity of LIG4 (PubMed:9242410, PubMed:9809069). Binding of the LIG4-XRCC4 complex to DNA ends is dependent on the assembly of the DNA-dependent protein kinase complex DNA-PK to these DNA ends (PubMed:10854421). LIG4 regulates nuclear localization of XRCC4 (PubMed:24984242). {ECO:0000269|PubMed:10854421, ECO:0000269|PubMed:12517771, ECO:0000269|PubMed:17290226, ECO:0000269|PubMed:23523427, ECO:0000269|PubMed:24984242, ECO:0000269|PubMed:29980672, ECO:0000269|PubMed:33586762, ECO:0000269|PubMed:8798671, ECO:0000269|PubMed:9242410, ECO:0000269|PubMed:9809069}.
Molecular Weight:	104.0 kDa
UniProt:	P49917
Pathways:	DNA Damage Repair, Production of Molecular Mediator of Immune Response

Application Details

Application Notes:	We expect the protein to work for functional studies. 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
Storage Comment:	Store at -80°C.
Expiry Date:	12 months