NHEJ1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	NHEJ1, Polyclonal Antibody
Full Product Name	NHEJ1, CT (NHEJ1, XLF, Non-homologous end-joining factor 1, Protein cernunnos, XRCC4-like factor) (MaxLight 750)
Product Gene Name	anti-NHEJ1 antibody
Product Synonym Names	NHEJ1; XLF; Non-homologous end-joining factor 1; Protein cernunnos; XRCC4-like factor
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	35,291 Da
OMIM	gene 611291
3D Structure	ModBase 3D Structure for Q9H9Q4
Immunogen	NHEJ1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 267-296 amino acids from the C-terminal region of human NHEJ1.
Conjugate	MaxLight750
Note	Preservative Free
Product Categories/Family for anti-NHEJ1 antibody	Antibodies; DNA Replication; Repair
Applications Tested/Suitable for anti-NHEJ1 antibody	Western Blot (WB), FLISA
Application Notes for anti-NHEJ1 antibody	WB: 1:100-500 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-NHEJ1 antibody	Double-strand breaks in DNA result from genotoxic stresses and are among the most damaging of DNA lesions. This gene encodes a DNA repair factor essential for the nonhomologous end-joining pathway, which preferentially mediates repair of double-stranded breaks. Mutations in this gene cause different kinds of severe combined immunodeficiency disorders.
Product References and Citations for anti-NHEJ1 antibody	Malivert, L., et al. J. Biol. Chem. 285(34):26475-26483(2010). Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010). Okada, Y., et al. Hum. Mol. Genet. 19(11):2303-2312(2010). Andres, S.N., et al. Mol. Cell 28(6):1093-1101(2007). Tsai, C.J., et al. Proc. Natl. Acad. Sci. U.S.A. 104(19):7851-7856(2007).

Other Notes	Small volumes of anti-NHEJ1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NHEJ1 purchase	MBS6325244 is an antibody targeting NHEJ1. Also known as NHEJ1, CT (NHEJ1, XLF, Non-homologous end-joining factor 1, Protein cernunnos, XRCC4-like factor) (MaxLight 750). Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NHEJ1. It may not necessarily be applicable to this product.

NCBI GI #	13376142
NCBI GeneID	79840
NCBI Accession #	NP_079058.1
UniProt Primary Accession #	Q9H9Q4
UniProt Secondary Accession #	Q4ZFW7; Q6IA64; Q96JS9; B8ZZA4
UniProt Related Accession #	Q9H9Q4
GenBank Nucleotide #	NM_024782.2
NCBI Official Full Name	non-homologous end-joining factor 1
NCBI Official Synonym Full Names	nonhomologous end-joining factor 1
NCBI Official Symbol	NHEJ1
NCBI Official Synonym Symbols	XLF
UniProt Protein Name	Non-homologous end-joining factor 1
UniProt Synonym Protein Names	Protein cernunnos; XRCC4-like factor
Protein Family	Non-homologous end-joining factor
UniProt Gene Name	NHEJ1
UniProt Synonym Gene Names	XLF
UniProt Entry Name	NHEJ1_HUMAN
NCBI Protein Information	non-homologous end-joining factor 1; XRCC4-like factor; protein cernunnos

UniProt Comments for NHEJ1	NHEJ1: DNA repair protein involved in DNA nonhomologous end joining (NHEJ) required for double-strand break (DSB) repair and V(D)J recombination. May serve as a bridge between XRCC4 and the other NHEJ factors located at DNA ends, or may participate in reconfiguration of the end bound NHEJ factors to allow XRCC4 access to the DNA termini. It may act in concert with XRCC6/XRCC5 (Ku) to stimulate XRCC4-mediated joining of blunt ends and several types of mismatched ends that are noncomplementary or partially complementary. Interacts with XRCC4 and the XRCC4-LIG4 complex. Binds DNA in a length-dependent manner. Ubiquitously expressed. Belongs to the XLF family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: DNA repair, damage Chromosomal Location of Human Ortholog: 2q35 Cellular Component: nucleus Molecular Function: protein binding; DNA binding Biological Process: central nervous system development; B cell differentiation; response to ionizing radiation; positive regulation of ligase activity; double-strand break repair via nonhomologous end joining; DNA recombination; T cell differentiation Disease: Severe Combined Immunodeficiency With Microcephaly, Growth Retardation, And Sensitivity To Ionizing Radiation
Research Articles on NHEJ1	**1.** Werner syndrome protein positively regulates XRCC4-like factor transcription.
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