NHEJ1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	NHEJ1, Polyclonal Antibody
Full Product Name	NHEJ1 Antibody, Biotin conjugated
Product Gene Name	anti-NHEJ1 antibody
Product Synonym Names	Non-homologous end-joining factor 1; Protein cernunnos; XRCC4-like factor; NHEJ1; XLF
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%, Protein G purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: NHEJ1 (MBS7051332) Biotin Conjugated Antibody: NHEJ1 (MBS7051335)
Molecular Weight	35,291 Da
OMIM	AJ972687 mRNA
3D Structure	ModBase 3D Structure for Q9H9Q4
Immunogen	Recombinant Human Non-homologous end-joining factor 1 protein (225-296AA)
Preservative	0.03% Proclin 300
Constituents	50% Glycerol, 0.01M PBS, pH 7.4
Conjugation	Biotin
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-68901 / sc-68902 / sc-79361 / sc-79364
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-NHEJ1 antibody	ELISA (EIA)
Related Product Information for anti-NHEJ1 antibody	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 (PubMed: 16439204, PubMed: 16439205, PubMed: 17470781). Binds DNA in a length-dependent manner (PubMed: 17317666).
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	MBS7051335 is an antibody targeting NHEJ1. Also known as NHEJ1 Antibody, Biotin conjugated. 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	non-homologous 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
NCBI Summary for NHEJ1	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. [provided by RefSeq, Jul 2008]
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: DNA ligase IV complex; nucleoplasm; nucleus Molecular Function: DNA end binding; protein binding Biological Process: B cell differentiation; double-strand break repair via nonhomologous end joining; response to ionizing radiation; T cell differentiation Disease: Severe Combined Immunodeficiency With Microcephaly, Growth Retardation, And Sensitivity To Ionizing Radiation
Research Articles on NHEJ1	**1.** using dual- and quadruple-trap optical tweezers combined with fluorescence microscopy, we show how human XRCC4, XLF and XRCC4-XLF complexes interact with DNA in real time

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