

# XLF Rabbit mAb

Catalog # AP78183

## Product Information

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<b>Application</b>	WB, IHC-P, IF, FC, ICC
<b>Primary Accession</b>	<a href="#">Q9H9Q4</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Immunogen</b>	A synthesized peptide derived from human XLF
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	33337

## Additional Information

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<b>Gene ID</b>	79840
<b>Other Names</b>	NHEJ1
<b>Dilution</b>	WB~1/500-1/1000 IHC-P~N/A IF~1:50~200 FC~1:10~50 ICC~N/A
<b>Format</b>	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	NHEJ1 {ECO:0000303   PubMed:17191205, ECO:0000312   HGNC:HGNC:25737}
<b>Function</b>	DNA repair protein involved in DNA non-homologous end joining (NHEJ); it is required for double-strand break (DSB) repair and V(D)J recombination and is also involved in telomere maintenance (PubMed: <a href="#">16439204</a> , PubMed: <a href="#">16439205</a> , PubMed: <a href="#">17317666</a> , PubMed: <a href="#">17470781</a> , PubMed: <a href="#">17717001</a> , PubMed: <a href="#">18158905</a> , PubMed: <a href="#">18644470</a> , PubMed: <a href="#">20558749</a> , PubMed: <a href="#">26100018</a> , PubMed: <a href="#">28369633</a> ). Plays a key role in NHEJ by promoting the ligation of various mismatched and non-cohesive ends (PubMed: <a href="#">17470781</a> , PubMed: <a href="#">17717001</a> , PubMed: <a href="#">19056826</a> ). Together with PAXX, collaborates with DNA polymerase lambda (POLL) to promote joining of non-cohesive DNA ends (PubMed: <a href="#">25670504</a> , PubMed: <a href="#">30250067</a> ). 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: <a href="#">16439204</a> , PubMed: <a href="#">16439205</a> , PubMed: <a href="#">17317666</a> , PubMed: <a href="#">17470781</a> ). 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:[21768349](#), PubMed:[21775435](#), PubMed:[22228831](#), PubMed:[22287571](#), PubMed:[26100018](#), PubMed:[27437582](#), PubMed:[28500754](#)). Alternatively, 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:[27437582](#), PubMed:[28500754](#)). 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](#)).

**Cellular Location**

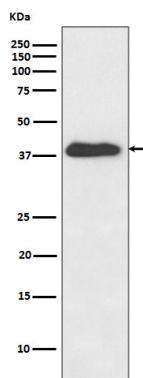
Nucleus. Chromosome. Note=Localizes to site of double-strand breaks; recruitment is dependent on XRCC5-XRCC6 (Ku) heterodimer

**Tissue Location**

Ubiquitously expressed.

## Images

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