

## Product datasheet for **RC203393**

### **XLF (NHEJ1) (NM\_024782) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	XLF (NHEJ1) (NM_024782) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	XLF
Synonyms:	XLF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203393 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAAGAACTGGAGCAAGGCCTGTTGATGCAGCCATGGGCGTGGCTACAGCTTGCAGAGAACTCCCTCT  
TGGCCAAGGTTTTATCACCAAGCAGGGCTATGCCTTGTGGTTTCAGATCTTCAACAGGTGTGGCATGA  
ACAGGTGGACACTAGTGTGGTCAGCCAGCGAGCCAAGGAGCTGAACAAGCGGCTCACTGCTCCTCTGCA  
GCTTTCTCTGTCATTTGGATAATCTCCTTCGCCATTGTTGAAGGACGCTGCTCACCTAGCGAAGCTA  
CCTTCTCTGTGATTGTGTGGCAGATGCACTGATTCTACGGGTGCGAAGTGAGCTCTCTGGCCTCCCTT  
CTATTGGAATTTCCACTGCATGCTAGCTAGTCCTTCCTGGTCTCCCAACATTTGATTGTCCTCTGATG  
GGCATGAGTCTGGCATTACAGTGCCAAGTGAGGGAGCTAGCAACGTTACTTCATATGAAAGACCTAGAGA  
TCCAAGACTACCAGGAGAGTGGGGCTACGCTGATTGAGATCGATTGAAGACAGAACCATTTGAAGAAAA  
TTCCTTCTTGGAAACAATTTATGATAGAGAACTGCCAGAGGCAATGCAGCATTGGTGATGGAAGCCCTTT  
GTCATGAATCTGCAGGATCTGTATATGGCAGTCACCACACAAGAGGTCCAAGTGGGACAGAAGCATCAAG  
GCGCTGGAGATCCTCATACTCAAACAGTGCTTCCTGCAAGGAATCGATAGCCAATGTGTAACCAGCC  
AGAACAACCTGGTCTCCTCAGCCCCAACCTCTCAGCACCTGAGAAAGAGTCCACGGTACTTCAGGCCCT  
CTGCAGAGACCTCAGCTGTCAAAGGTCAAGAGGAAGAAGCCAAGGGTCTCTTCAGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC203393 protein sequence  
Red=Cloning site Green=Tags(s)

MEELEQGLLMQPWAWLQLAENSLAKVFIKQGYALLVSDLQQVWHEQVDTSVVSQRAKELNKRLTAPPA  
 AFLCHLDNLLRPLLKDAHPSEATFSCDCVADALILRVRSEL SGLPFYWNFHCMLASPSLVSQHLIRPLM  
 GMSLALQCQVRELATLLHMKDLEIQDYQESGATLIRDRLKTEPFEENSFLEQFMIEKLPEACSIGDGKPF  
 VMNLQDLYMAVTTQEYVQVGQKHQAGDPHTSNSASLQGIDSQCVNQPEQLVSSAPTL SAPEKESTGTSGP  
 LQRPQLSKVKRKKPRGLFS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6056\\_h06.zip](https://cdn.origene.com/chromatograms/mk6056_h06.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_024782

**ORF Size:** 897 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_024782.3](#)

**RefSeq Size:** 2119 bp

**RefSeq ORF:** 900 bp

**Locus ID:** 79840

**UniProt ID:** [Q9H9Q4](#)

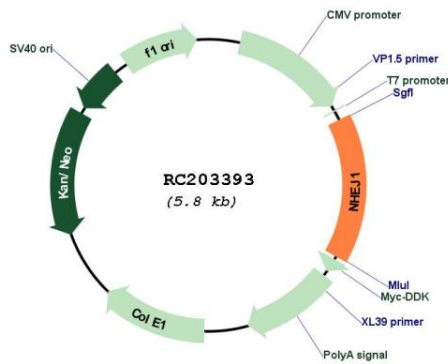
**Cytogenetics:** 2q35

**Protein Pathways:** Non-homologous end-joining

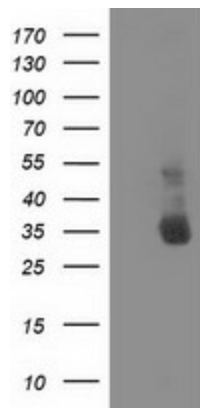
**MW:** 33.3 kDa

**Gene Summary:** 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]

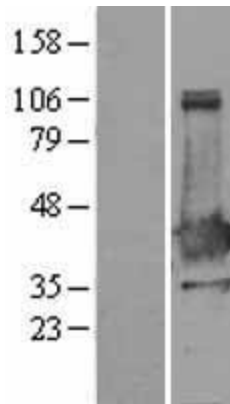
**Product images:**



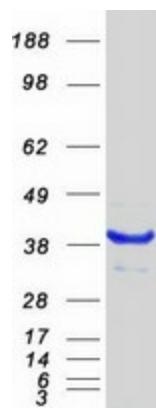
Circular map for RC203393



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NHEJ1 (Cat# RC203393, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NHEJ1 (Cat# [TA502007]). Positive lysates [LY403031] (100ug) and [LC403031] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403031]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203393 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NHEJ1 protein (Cat# [TP303393]). The protein was produced from HEK293T cells transfected with NHEJ1 cDNA clone (Cat# RC203393) using MegaTran 2.0 (Cat# [TT210002]).