

# Recombinant human NHEJ1 protein

Catalog Number: ATGP1684

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-224aa

### UniProt No.

Q9H9Q4

### NCBI Accession No.

NP\_079058

### Alternative Names

Non-homologous end-joining factor 1, XLF

## PRODUCT SPECIFICATION

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### Molecular Weight

27.8 kDa (247aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.1M NaCl, 20% glycerol, 1mM DTT

### Purity

> 90% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

Non-homologous end-joining factor 1, also known as NHEJ1, belongs to the XLF family. NHEJ1 was originally discovered as the protein mutated in five patients with growth retardation, microcephaly, and immunodeficiency. The protein is required for the non-homologous end joining (NHEJ) pathway of DNA repair. Patients with NHEJ1 mutations also have immunodeficiency due to a defect in V (D) J recombination, which utilizes NHEJ to promote immune system diversity. XLF interacts with DNA ligase IV and XRCC4 and is thought to be involved in the ligation step of NHEJ. Recombinant human NHEJ1 protein, fused to His-tag at N-terminus, was

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expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

MGSSHHHHHH SSSLVPRGSH MGSMEEELEQG LLMQPWAWLQ LAENSLAKV FITKQGYALL VSDLQQVWHE  
QVDTSVVSQR AKELNKRLTA PPAFLCHLD NLLRPLLKDA AHPSEATFSC DCVADALILR VRSELSGLPF YWNFHCMLAS  
PSLVSQHLIR PLMGMSLALQ CQVRELATLL HMKDLEIQDY QESGATLIRD RLKTEPFEEEN SFLEQFMIEK LPEACSIGDG  
KPFVMNLQDL YMAVTTQ

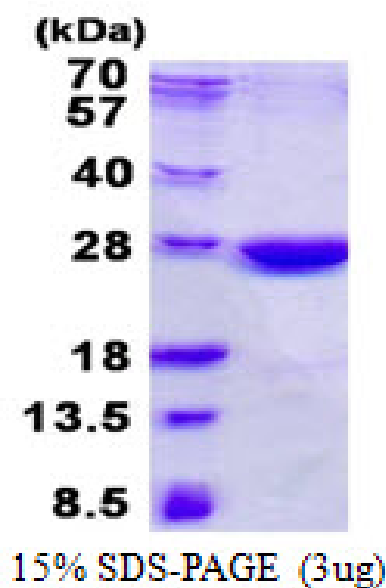
## General References

Buck D., et al. (2006) Cell. 124:287-299

Ahnesorg P., et al. (2006) Cell. 124:301-313

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.