

## NEIL2 Human

**Description:** NEIL2 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 356 amino acids (1-332) and having a molecular mass of 39.4kDa. NEIL2 is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Catalog #: ENPS-614

For research use only.

**Synonyms:** Endonuclease 8-like 2, DNA glycosylase/AP lyase Neil2, DNA-(apurinic or apyrimidinic site) lyase Neil2, Endonuclease VIII-like 2, Nei homolog 2, NEH2, Nei-like protein 2, NEIL2, NEH2.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MGSHPMEGPL VRKFHHLVSP  
FVGQQVVKTG GSSKKLQPAS LQSLWLQDTQ VHGGKFLRF DLDEEMGPPG SSPTPEPPQK  
EVQKEGAADP KQVGEPGSGQK TLDGSSRSAE LVPQGDDSE YLERDAPAGD AGRWLRVSFG  
LFGSVWVNDP SRAKKANKRG DWRDPSPRLV LHFGGGGFLA FYNCQLSWSS SPVVTPTCDI  
LSEKFHRGQA LE

**Purity:** Greater than 85.0% as determined by SDS-PAGE.

### Formulation:

The NEIL2 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 10% glycerol and 0.1M NaCl.

### Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Endonuclease 8-like 2 (NEIL2) is a member of a class of DNA glycosylases homologous to the bacterial Fpg/Nei family. These glycosylases set off the first step in base excision repair by cleaving bases damaged by reactive oxygen species and introducing a DNA strand break through the associated lyase reaction. NEIL2 is involved in base excision repair of DNA damaged by oxidation or by mutagenic agents. NEIL2 has DNA glycosylase activity towards 5-hydroxyuracil and other oxidized derivatives of cytosine with a preference for mismatched double stranded DNA (DNA bubbles). NEIL2 has insignificant or undetectable activity with 8-oxoguanine, thymine glycol, 2-hydroxyadenine, hypoxanthine, and xanthine. NEIL2 also has AP (apurinic/apyrimidinic) lyase activity and creates incisions in the DNA strand. NEIL2 cleaves the DNA backbone by beta-delta exclusion to produce a single-strand break at the site of the removed base with both 3'- and 5'-phosphates. NEIL2 is found in the testis, skeletal muscle, heart, brain, placenta, lung, pancreas, kidney and liver.

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