
Product Data Sheet

Product Name: NEIL2 Human
 Cat. No.: GP21997
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
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.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSHMPEGPL VRKFHHLVSP FVGQQVVKTG GSSKKLQPAS LQSLWLQDTQ VHGKKLFLRF DLDEEMGPPG SSPTPEPPQK EVQKEGAADP KQVGEPGQK TLDGSSRSAE LVPQGEDDSE YLERDAPAGD AGRWLRVSFG LFGSVVWVDF SRAKKANKRG DWRDPSRLV LHFGGGGFLA FYNCQLSWSS SPVVTPTCDI LSEKFHRGQA LEALGQAQPV CYLLDQRYF SGLGNIKNE ALYRAGIHPL SLGSVLSASR REVLVDHVVE FSTAWLQGKF QGRPQHTQVY QKEQCPAGHQ VMKEAFGPED GLQRLTWWCP QCQPQLSEEP EQCQFS.		
Formulation	The NEIL2 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 10% glycerol and 0.1M NaCl.		

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

Caution: Product has not been fully validated for medical applications. For research use only.

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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.

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.

Background

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.

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