10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NEI3 Rabbit pAb

Catalog # AP100227

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q8TAT5
Other Accession	Q8TAT5
Predicted	Rat, Pig, Human, Mouse, Rabbit, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67769
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NEI3
Epitope Specificity	471-570/605
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the FPG family. Contains 1 FPG-type zinc finger. Contains 1 RanBP2-type zinc finger.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	NEIL3 belongs to a class of DNA glycosylases homologous to the bacterial Fpg/Nei family. These glycosylases initiate the first step in base excision repair by cleaving bases damaged by reactive oxygen species and introducing a DNA strand break via the associated lyase reaction (Bandaru et al., 2002 [PubMed 12509226]).[supplied by OMIM, Mar 2008]

Additional Information

Gene ID	55247
Other Names	FGP2; FPG2; NEI3; ZGRF3; hFPG2; hNEI3; RGD1310562; NEIL3_HUMAN; NEIL3; DNA glycosylase FPG2; DNA glycosylase/AP lyase Neil3; Endonuclease VIII-like 3; Nei-like protein 3; 3.2.2.-; 4.2.99.18; NEIL3_MOUSE; D3ZKJ8_RAT; nei like DNA glycosylase 3; nei endonuclease VIII-like 3 (E. coli); zinc finger, GRF-type containing 3
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	NEIL3
Function	DNA glycosylase which prefers single-stranded DNA (ssDNA), or partially ssDNA structures such as bubble and fork structures, to double-stranded DNA (dsDNA) (PubMed:12433996, PubMed:19170771, PubMed:22569481, PubMed:23755964). Mediates interstrand cross-link repair in response to replication stress: acts by mediating DNA glycosylase activity, cleaving one of the two N-glycosyl bonds comprising the interstrand cross-link, which avoids the formation of a double-strand break but generates an abasic site that is bypassed by translesion synthesis polymerases (By similarity). In vitro, displays strong glycosylase activity towards the hydantoin lesions spiroiminodihydantoin (Sp) and guanidinohydantoin (Gh) in both ssDNA and dsDNA; also recognizes FapyA, FapyG, 5-OHU, 5-OHC, 5-OHMH, Tg and 8-oxoA lesions in ssDNA (PubMed:12433996, PubMed:19170771, PubMed:22569481, PubMed:23755964). No activity on 8-oxoG detected (PubMed:12433996, PubMed:19170771, PubMed:22569481, PubMed:23755964). Also shows weak DNA-(apurinic or apyrimidinic site) lyase activity (PubMed:12433996, PubMed:19170771, PubMed:22569481, PubMed:23755964). In vivo, appears to be the primary enzyme involved in removing Sp and Gh from ssDNA in neonatal tissues (PubMed:12433996, PubMed:19170771, PubMed:22569481, PubMed:23755964).
Cellular Location	Nucleus. Chromosome {ECO:0000250|UniProtKB:A0A1L8HU22}. Note=Recruited to replication stress sites via interaction with ubiquitinated CMG helicase {ECO:0000250|UniProtKB:A0A1L8HU22}
Tissue Location	Expressed in keratinocytes and embryonic fibroblasts (at protein level). Also detected in thymus, testis and fetal lung primary fibroblasts.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.