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NEIL3 Antibody(Center) Blocking peptide

Synthetic peptide
Catalog # BP19397c

Specification

NEIL3 Antibody(Center) Blocking peptide - Product Information

Primary Accession Q8TAT5

NEIL3 Antibody(Center) Blocking peptide - Additional Information

Gene ID 55247

Other Names
Endonuclease 8-like 3, 322-, DNA glycosylase FPG2, DNA glycosylase/AP lyase Neil3, Endonuclease VIII-like 3, Nei-like protein 3, NEIL3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NEIL3 Antibody(Center) Blocking peptide - 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:<a

href="http://www.uniprot.org/citations/12433996" target="_blank">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.

NEIL3 Antibody(Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

NEIL3 Antibody(Center) Blocking peptide - Images

NEIL3 Antibody(Center) Blocking peptide - Background

NEIL3 belongs to a class of DNA glycosylases homologous tothe bacterial Fpg/Nei family. These glycosylases initiate the firststep in base excision repair by cleaving bases damaged by reactiveoxygen species and introducing a DNA strand break via theassociated lyase reaction (Bandaru et al., 2002 [PubMed12509226]).

NEIL3 Antibody(Center) Blocking peptide - References

Krokeide, S.Z., et al. Protein Expr. Purif. 65(2):160-164(2009)Takao, M., et al. Genes Cells 14(2):261-270(2009)Dallosso, A.R., et al. Gut 57(9):1252-1255(2008)Bethke, L., et al. J. Natl. Cancer Inst. 100(4):270-276(2008)Newton-Cheh, C., et al. BMC Med. Genet. 8 SUPPL 1, S7 (2007) :