

**NEIL3 Polyclonal Antibody**  
**Catalog # AP71214****Specification****NEIL3 Polyclonal Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q8TAT5</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal

**NEIL3 Polyclonal Antibody - Additional Information****Gene ID** 55247**Other Names**NEIL3; Endonuclease 8-like 3; DNA glycosylase FPG2; DNA glycosylase/AP lyase Neil3;  
Endonuclease VIII-like 3; Nei-like protein 3**Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**NEIL3 Polyclonal Antibody - 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:<a href="http://www.uniprot.org/citations/12433996" target="\_blank">12433996</a>, PubMed:<a href="http://www.uniprot.org/citations/19170771" target="\_blank">19170771</a>, PubMed:<a href="http://www.uniprot.org/citations/22569481" target="\_blank">22569481</a>, PubMed:<a href="http://www.uniprot.org/citations/23755964" target="\_blank">23755964</a>). 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:<a href="http://www.uniprot.org/citations/12433996" target="\_blank">12433996</a>, PubMed:<a href="http://www.uniprot.org/citations/19170771" target="\_blank">19170771</a>).

target="\_blank">19170771</a>, PubMed:<a href="http://www.uniprot.org/citations/22569481" target="\_blank">22569481</a>, PubMed:<a href="http://www.uniprot.org/citations/23755964" target="\_blank">23755964</a>). No activity on 8-oxoG detected (PubMed:<a href="http://www.uniprot.org/citations/12433996" target="\_blank">12433996</a>, PubMed:<a href="http://www.uniprot.org/citations/19170771" target="\_blank">19170771</a>, PubMed:<a href="http://www.uniprot.org/citations/22569481" target="\_blank">22569481</a>, PubMed:<a href="http://www.uniprot.org/citations/23755964" target="\_blank">23755964</a>). Also shows weak DNA-(apurinic or apyrimidinic site) lyase activity (PubMed:<a href="http://www.uniprot.org/citations/12433996" target="\_blank">12433996</a>, PubMed:<a href="http://www.uniprot.org/citations/19170771" target="\_blank">19170771</a>, PubMed:<a href="http://www.uniprot.org/citations/22569481" target="\_blank">22569481</a>, PubMed:<a href="http://www.uniprot.org/citations/23755964" target="\_blank">23755964</a>). In vivo, appears to be the primary enzyme involved in removing Sp and Gh from ssDNA in neonatal tissues (PubMed:<a href="http://www.uniprot.org/citations/12433996" target="\_blank">12433996</a>, PubMed:<a href="http://www.uniprot.org/citations/19170771" target="\_blank">19170771</a>, PubMed:<a href="http://www.uniprot.org/citations/22569481" target="\_blank">22569481</a>, PubMed:<a href="http://www.uniprot.org/citations/23755964" target="\_blank">23755964</a>).

### 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.

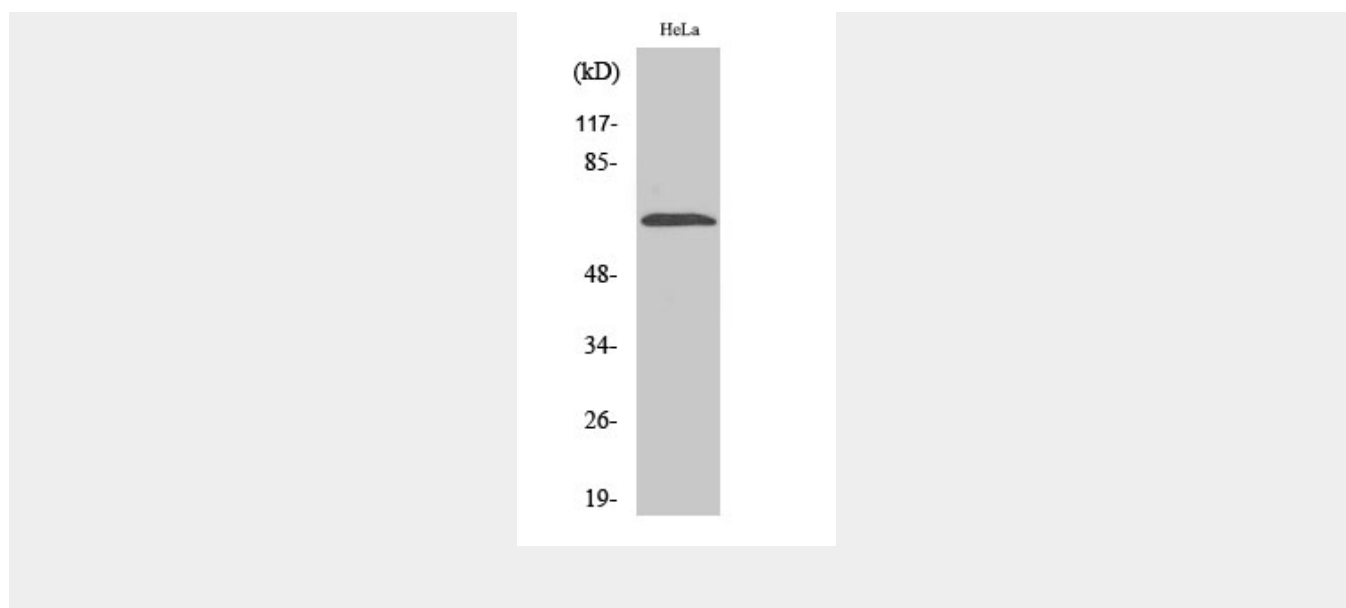
## NEIL3 Polyclonal Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## NEIL3 Polyclonal Antibody - Images





### NEIL3 Polyclonal Antibody - Background

DNA glycosylase which prefers single-stranded DNA (ssDNA), or partially ssDNA structures such as bubble and fork structures, to double-stranded DNA (dsDNA). 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. No activity on 8-oxoG detected. Also shows weak DNA-(apurinic or apyrimidinic site) lyase activity. In vivo, appears to be the primary enzyme involved in removing Sp and Gh from ssDNA in neonatal tissues. Seems to be an important facilitator of cell proliferation in certain populations, for example neural stem/progenitor cells and tumor cells, suggesting a role in replication-associated DNA repair.