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Goat Anti-NEIL1 / NEH1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1716a

Specification

Goat Anti-NEIL1 / NEH1 Antibody - Product Information

Application	**IHC, E**
Primary Accession	Q96FI4
Other Accession	NP_078884, 79661
Reactivity	**Human**
Predicted	**Pig**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**43684**

Goat Anti-NEIL1 / NEH1 Antibody - Additional Information

Gene ID 79661

Other Names
Endonuclease 8-like 1, 3.2.2.-, 4.2.99.18, DNA glycosylase/AP lyase Neil1, DNA-(apurinic or apyrimidinic site) lyase Neil1, Endonuclease VIII-like 1, FPG1, Nei homolog 1, NEH1, Nei-like protein 1, NEIL1

Dilution
IHC~~1:100~500
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-NEIL1 / NEH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-NEIL1 / NEH1 Antibody - Protein Information

Name NEIL1

Function

Involved in base excision repair of DNA damaged by oxidation or by mutagenic agents. Acts as a DNA glycosylase that recognizes and removes damaged bases. Has a preference for oxidized pyrimidines, such as thymine glycol, formamidopyrimidine (Fapy) and 5-hydroxyuracil. Has marginal activity towards 8-oxoguanine. Has AP (apurinic/apyrimidinic) lyase activity and introduces nicks in the DNA strand. Cleaves the DNA backbone by beta-delta elimination to generate a single-strand break at the site of the removed base with both 3'- and 5'-phosphates. Has DNA glycosylase/lyase activity towards mismatched uracil and thymine, in particular in U:C and T:C mismatches. Specifically binds 5- hydroxymethylcytosine (5hmC), suggesting that it acts as a specific reader of 5hmC.

Cellular Location
Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Chromosome. Note=During mitosis, associates with centrosomes and condensed chromatin

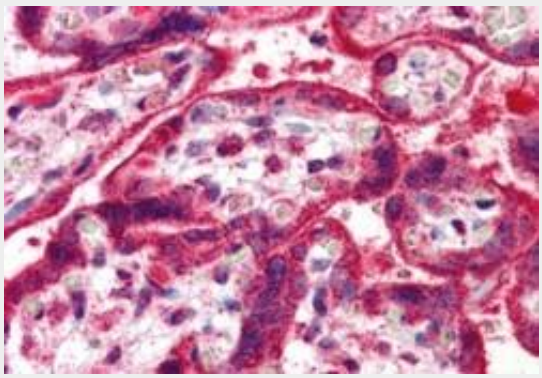
Tissue Location
Ubiquitous..

Goat Anti-NEIL1 / NEH1 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 Cytomety
- Cell Culture

Goat Anti-NEIL1 / NEH1 Antibody - Images



AF1716a (5 µg/ml) staining of paraffin embedded Human Placenta. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-NEIL1 / NEH1 Antibody - Background

NEIL1 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]).

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Variation within DNA repair pathway genes and risk of multiple sclerosis. Briggs FB, et al. Am J Epidemiol, 2010 Jul 15. PMID 20522537.
Comprehensive screen of genetic variation in DNA repair pathway genes and postmenopausal breast cancer risk. Monsees GM, et al. Breast Cancer Res Treat, 2010 May 23. PMID 20496165.
Mutation versus repair: NEIL1 removal of hydantoin lesions in single-stranded, bulge, bubble, and duplex DNA contexts. Zhao X, et al. Biochemistry, 2010 Mar 2. PMID 20099873.
Non-specific DNA binding interferes with the efficient excision of oxidative lesions from chromatin by the human DNA glycosylase, NEIL1. Odell ID, et al. DNA Repair (Amst), 2010 Feb 4. PMID 20005182.
Catalytically impaired hMYH and NEIL1 mutant proteins identified in patients with primary sclerosing cholangitis and cholangiocarcinoma. Forsbring M, et al. Carcinogenesis, 2009 Jul. PMID 19443904.