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NTH1 Antibody

Rabbit mAb
Catalog # AP93021

Product Information

Application	WB, IHC, IF, ICC, IHF
Primary Accession	P78549
Reactivity	Human
Clonality	Monoclonal
Other Names	hNTH1; NTH1; Nthl1; OCTS3;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	33570

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human NTH1
Description	Has both an apurinic and/or apyrimidinic endonuclease activity and a DNA N-glycosylase activity. Incises damaged DNA at cytosines, thymines and guanines. Acts on a damaged strand, 5' from the damaged site. Required for the repair of both oxidative DNA damage and spontaneous mutagenic lesions.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

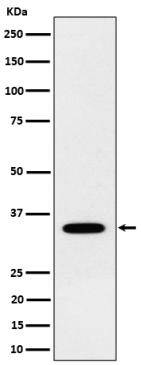
Protein Information

Name	NTHL1 {ECO:0000255|HAMAP-Rule:MF_03183}
Synonyms	NTH1, OCTS3
Function	Bifunctional DNA N-glycosylase with associated apurinic/apyrimidinic (AP) lyase function that catalyzes the first step in base excision repair (BER), the primary repair pathway for the repair of oxidative DNA damage (PubMed:29610152, PubMed:9927729). The DNA N-glycosylase activity releases the damaged DNA base from DNA by cleaving the N-glycosidic bond, leaving an AP site. The AP-lyase activity cleaves the phosphodiester bond 3' to the AP site by a beta- elimination. Primarily recognizes and repairs oxidative base damage of pyrimidines. Also has 8-oxo-7,8-dihydroguanine (8-oxoG) DNA glycosylase activity. Acts preferentially on DNA damage opposite guanine residues in DNA. Is able to process lesions in nucleosomes without requiring or inducing nucleosome disruption.
Cellular Location	Nucleus {ECO:0000255|HAMAP-Rule:MF_03183,

ECO:0000269|PubMed:10882850, ECO:0000269|PubMed:12531031, ECO:0000269|PubMed:9611236}. Mitochondrion {ECO:0000255|HAMAP-Rule:MF_03183, ECO:0000269|PubMed:9611236}

Tissue Location Widely expressed with highest levels in heart and lowest levels in lung and liver.

Images



Western blot analysis of NTH1 expression in 293 cell lysate.