

Product Specification Sheet

Human Endonuclease III, the product of nth gene (hNTH1) Antibodies

Cat # hNTH11-S,	Rabbit Anti-hNTH1 antiserum # 1,	SIZE: 100 ul
Cat # hNTH11-C	Recombinant Human purified hNTH1 Western blot +ve control	SIZE: 100 ul

Reactive oxygen species, generated during normal cellular activities or by ionizing radiation and by many oxidizing/alkylating agents, can modify (damage) DNA bases by disrupting the phosphodiester backbone. Unrepaired damaged/modified DNA has been implicated in aging and cancer. Many proteins that are involved in BER (base excision repair) have been identified in E. Coli. Human homolog of E. Coli Endonuclease III, the product of **the nth gene (hNTH1)**, catalyzes the excision of pyrimidines damaged by ring opening or ring saturation. hNTH1 also possesses an associated lyase activity that incises the DNA backbone adjacent to apurinic/aprimidinic sites. **hNTH1** gene (chromosome 16p13.3) encodes a protein of 312 aa.

Source of Antigen and Antibodies

Antigen	Full length human hNTH1 (34 kda) was cloned and expressed in E. Coli and purified
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (hNTH11-S)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Full length human hNTH1 (34 kda) was cloned and expressed in E. Coli and purified (>95%). For Western blot +ve control (**Cat # hNTH11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of hNTH11-C for good visibility with antibody Cat # hNTH11-S. Store at -20°C in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **RELMG31-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage

Antiserum (unpurified, undiluted)

100 ul/vial
solution lyophilized powder
contains 0.05% sodium azide
Reconstitute powder 100 ul PBS

Storage

Short-term: unopened, undiluted vials for less than a week at 4°C.

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

Western Blotting: An initial dilution of 1:1K-2K is recommended for Western. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions. The antibody has detected ~34 kDa band from human cells and tissues.

ELISA (1:10-50K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: Not tested. An initial dilution of 1:500:1K is recommended for IHC. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions.

Specificity & Cross-reactivity

Antibody crossreactivity in various species is not known.

General References: Aspinwall R et al (1997) PNAS 94, 109-114; Hilbert TP et al (1996) Biochemistry 35, 2505-2511; Hilbert TP et al (1997) J Biol. Chem. 272, 6733-6740; Sarker IK et al (1998) Gene 222, 287-295; Sarker AH et al (1998) J Mol. Biol. 282, 761-774

***This product is for In vitro research use only.**

Related material available from ADI

Antibodies to MGMT, hNTH, Ape, mutY, OGG1, XRCC1, DNA Ligase, Polymerase, XPG, ORC1 etc are available.

hNTH11-S

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