

Rabbit anti-Human NTHL1 Polyclonal Antibody | anti-NTHL1 antibody

Anti-NTHL1 Antibody Picoband

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA127168	Rabbit	Human	Flow Cytometry, Functional Assay, Western Blot, Immunofluorescence, Immunocytochemistry, ELISA

PRODUCT SYNONYMS

NTHL1; Polyclonal Antibody; Anti-NTHL1 Antibody Picoband; Rapamycin-insensitive companion of mTOR; RPTOR independent companion of MTOR complex 2 ; AVO3 homolog; hAVO3; RICTOR; KIAA1999; anti-NTHL1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	In fetal tissues, it is highly expressed in heart, lung liver and kidney, and weakly expressed in brain. In adult, it is highly expressed in pancreas, spleen, thymus and peripheral blood leukocytes, expressed at moderate levels in heart, placenta, lung, liver, skeletal muscle, kidney, prostate, ovary, small intestine and colon, and weakly expressed in brain and testis.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Applicable Applications for anti-NTHL1 antibody	FCM/FACS (Flow Cytometry), WB (Western Blot), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA
Immunogen	E coli-derived human NTHL1 recombinant protein (Position: H52-L312).
Subcellular Localization	Cytosol. TORC2 complex
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Subunit of mTORC2, which regulates cell growth and survival in response to hormonal signals. mTORC2 is activated by growth factors, but, in contrast to mTORC1, seems to be nutrient-insensitive. mTORC2 seems to function upstream of Rho GTPases to regulate the actin cytoskeleton, probably by activating one or more Rho-type guanine nucleotide exchange factors. mTORC2 promotes the serum-induced formation of stress-fibers or F-actin. mTORC2 plays a critical role in AKT1 'Ser-473' phosphorylation, which may facilitate the phosphorylation of the activation loop of AKT1 on 'Thr-308' by PDK1 which is a prerequisite for full activation. mTORC2 regulates the phosphorylation of SGK1 at 'Ser-422'. mTORC2 also modulates the phosphorylation of PRKCA on 'Ser-657'. Plays an essential role in embryonic growth and development.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months. Avoid repeated freezing and thawing.



FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of MCF-7 cells using anti-NTHL1 antibody (AAA127168).Overlay histogram showing MCF-7 cells stained with AAA127168 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NTHL1 Antibody (AAA127168, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)

Figure 1. Western blot analysis of NTHL1 using anti-NTHL1 antibody (AAA127168).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human 293T whole cell lysates,Lane 2: human Hela whole cell lysates,Lane 3: human K562 whole cell lysates,Lane 4: human MCF-7 whole cell lysates,Lane 5: human HepG2 whole cell lysates,Lane 6: human A549 whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NTHL1 antigen affinity purified polyclonal antibody (#AAA127168) at 0.25ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for NTHL1 at approximately 34 kDa. The expected band size for NTHL1 is at 34 kDa.



IF (Immunofluorescence)

Figure 2. IF analysis of NTHL1 using anti-NTHL1 antibody (AAA127168) and anti-Beta Tubulin antibody (M01857-3).NTHL1 was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-NTHL1 Antibody (AAA127168) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4 degree C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. Visualize using a fluoescence microscope and filter sets appropriate for the label used.

ADDITIONAL INFORMATION

Related Product Information for anti-NTHL1 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product Categories/Family for anti-NTHL1 antibody	Primary Antibodies; Signal Transduction
References	1. Aspinwall, R., Rothwell, D. G., Roldan-Arjona, T., Anselmino, C., Ward, C. J., Cheadle, J. P., Sampson, J. R., Lindahl, T., Harris, P. C., Hickson, I. D. Cloning and characterization of a functional human homolog of Escherichia coli endonuclease III. Proc. Nat. Acad. Sci. 94: 109-114, 1997.2. Hilbert, T. P., Chaung, W., Boorstein, R. J., Cunningham, R. P., Teebor, G. W. Cloning and expression of the cDNA encoding the human homologue of the DNA repair enzyme, Escherichia coli endonuclease III. J. Biol. Chem. 272: 6733-6740, 1997. 3. Imai, K., Sarker, A. H., Akiyama, K., Ikeda, S., Yao, M., Tsutsui, K., Shohmori, T., Seki, S. Genomic structure and sequence of a human homologue (NTHL1/NTH1) of Escherichia coli endonuclease III with those of the adjacent parts of TSC2 and SLC9A3R2 genes. Gene 222: 287-295, 1998.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4505471
NCBI GeneID	4913
NCBI Accession #	NP_002519.1
NCBI GenBank Nucleotide #	NM_002528.5
UniProt Accession #	P78549; Q1MVR1; Q99566; Q99794; Q9BPX2

Molecular Weight	32,839 Da
NCBI Official Full Name	endonuclease III-like protein 1
NCBI Official Synonym Full Names	nth endonuclease III-like 1 (E. coli)
NCBI Official Symbol	NTHL1
NCBI Official Synonym Symbols	NTH1; OCTS3; hNTH1
NCBI Protein Information	endonuclease III-like protein 1; DNA glycosylase/AP lyase; NTHL1; bifunctional DNA N-glycosylase/DNA-(apurinic or apyrimidinic site) lyase
UniProt Protein Name	Endonuclease III-like protein 1
UniProt Gene Name	NTHL1
UniProt Synonym Gene Names	hNTH1
UniProt Entry Name	NTH_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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