

Datasheet for ABIN7150355
anti-APEX1 antibody (AA 32-318)

3 Images

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Overview

Quantity:	100 µg
Target:	APEX1
Binding Specificity:	AA 32-318
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This APEX1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Chromatin Immunoprecipitation (ChIP)

Product Details

Immunogen:	Recombinant Human DNA-(apurinic or apyrimidinic site) lyase protein (32-318AA)
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Purification:	>95%, Protein G purified

Target Details

Target:	APEX1
Alternative Name:	APEX1 (APEX1 Products)
Background:	Background: Multifunctional protein that plays a central role in the cellular response to oxidative

stress. The two major activities of APEX1 in DNA repair and redox regulation of transcriptional factors. Functions as a apurinic/apyrimidinic (AP) endodeoxyribonuclease in the DNA base excision repair (BER) pathway of DNA lesions induced by oxidative and alkylating agents. Initiates repair of AP sites in DNA by catalyzing hydrolytic incision of the phosphodiester backbone immediately adjacent to the damage, generating a single-strand break with 5'-deoxyribose phosphate and 3'-hydroxyl ends. Does also incise at AP sites in the DNA strand of DNA/RNA hybrids, single-stranded DNA regions of R-loop structures, and single-stranded RNA molecules. Has a 3'-5' exonuclease activity on mismatched deoxyribonucleotides at the 3' termini of nicked or gapped DNA molecules during short-patch BER. Possesses a DNA 3' phosphodiesterase activity capable of removing lesions (such as phosphoglycolate) blocking the 3' side of DNA strand breaks. May also play a role in the epigenetic regulation of gene expression by participating in DNA demethylation. Acts as a loading factor for POLB onto non-incised AP sites in DNA and stimulates the 5'-terminal deoxyribose 5'-phosphate (dRp) excision activity of POLB. Plays a role in the protection from granzymes-mediated cellular repair leading to cell death. Also involved in the DNA cleavage step of class switch recombination (CSR). On the other hand, APEX1 also exerts reversible nuclear redox activity to regulate DNA binding affinity and transcriptional activity of transcriptional factors by controlling the redox status of their DNA-binding domain, such as the FOS/JUN AP-1 complex after exposure to IR. Involved in calcium-dependent down-regulation of parathyroid hormone (PTH) expression by binding to negative calcium response elements (nCaREs). Together with HNRNPL or the dimer XRCC5/XRCC6, associates with nCaRE, acting as an activator of transcriptional repression. Stimulates the YBX1-mediated MDR1 promoter activity, when acetylated at Lys-6 and Lys-7, leading to drug resistance. Acts also as an endoribonuclease involved in the control of single-stranded RNA metabolism. Plays a role in regulating MYC mRNA turnover by preferentially cleaving in between UA and CA dinucleotides of the MYC coding region determinant (CRD). In association with NMD1, plays a role in the rRNA quality control process during cell cycle progression. Associates, together with YBX1, on the MDR1 promoter. Together with NPM1, associates with rRNA. Binds DNA and RNA.

Aliases: AP endonuclease 1 antibody, AP endonuclease class I antibody, AP lyase antibody, APE 1 antibody, APE antibody, APE-1 antibody, APEN antibody, APEX 1 antibody, APEX antibody, APEX nuclease (multifunctional DNA repair enzyme) 1 antibody, Apex nuclease 1 antibody, APEX nuclease antibody, APEX1 antibody, APEX1_HUMAN antibody, Apurinic endonuclease antibody, Apurinic-apyrimidinic endonuclease 1 antibody, Apurinic/apyrimidinic (abasic) endonuclease antibody, Apurinic/apyrimidinic endonuclease 1 antibody, Apurinic/apyrimidinic exonuclease antibody, APX antibody, BAP1 antibody, Deoxyribonuclease (apurinic or apyrimidinic) antibody, DNA (apurinic or apyrimidinic site) lyase antibody, DNA-(apurinic or

Target Details

aprimidinic site) lyase, mitochondrial antibody, EC 4.2.99.18 antibody, HAP 1 antibody, HAP1 antibody, Human Apurinic endonuclease 1 antibody, MGC139790 antibody, Multifunctional DNA repair enzyme antibody, Redox factor 1 antibody, Redox factor-1 antibody, REF 1 antibody, REF 1 protein antibody, REF-1 antibody, REF1 antibody, REF1 protein antibody

UniProt: [P27695](#)

Pathways: [DNA Damage Repair](#), [Chromatin Binding](#), [Cell RedoxHomeostasis](#), [Smooth Muscle Cell Migration](#), [Positive Regulation of Response to DNA Damage Stimulus](#)

Application Details

Application Notes: Recommended dilution: WB:1:1000-1:5000, IHC:1:20-1:200,

Restrictions: For Research Use only

Handling

Format: Liquid

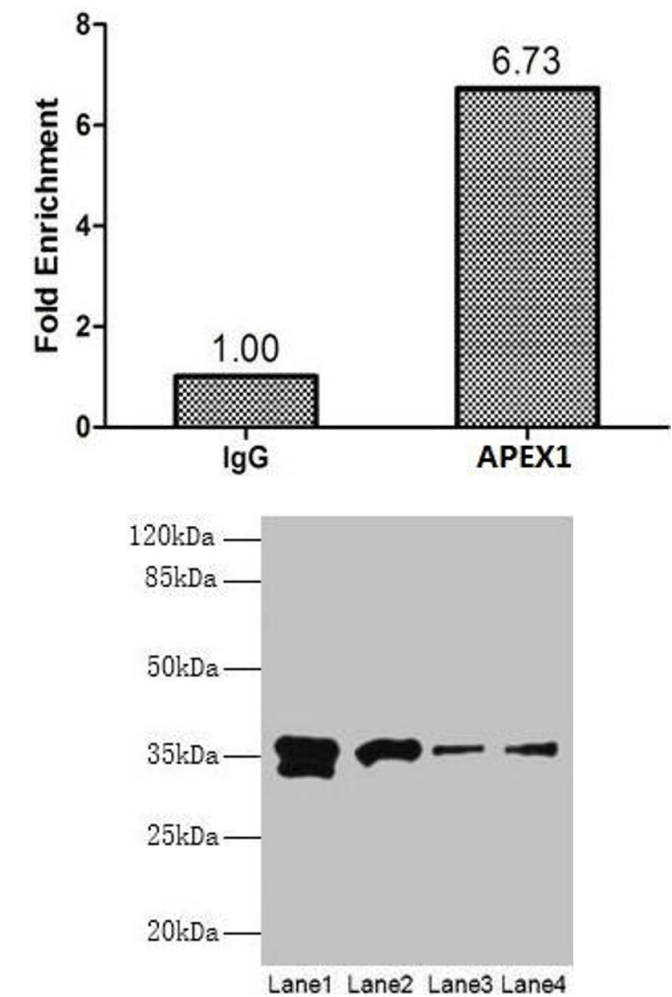
Buffer: Preservative: 0.03 % Proclin 300
Constituents: 50 % Glycerol, 0.01M PBS, PH 7.4

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C,-80 °C

Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.



Immunohistochemistry

Image 1. Chromatin Immunoprecipitation MCF-7 (1.1×10^6) were cross-linked with formaldehyde, sonicated, and immunoprecipitated with 4 μ g anti-APEX1 or a control normal rabbit IgG. The resulting ChIP DNA was quantified using real-time PCR with primers against the MDR1 promoter.

Western Blotting

Image 2. Western blot All lanes: APEX1 antibody at 2 μ g/mL
Lane 1: HeLa whole cell lysate Lane 2: Mouse brain tissue
Lane 3: MCF-7 whole cell lysate Lane 4: A431 whole cell lysate
Secondary Goat polyclonal to rabbit IgG at 1/15000 dilution
Predicted band size: 36 kDa Observed band size: 36 kDa

Immunohistochemistry

Image 3. Immunohistochemistry of paraffin-embedded human cervical cancer using ABIN7150355 at dilution of 1:100

