

APEX1 Polyclonal Antibody

Catalog number: 10323-1-AP

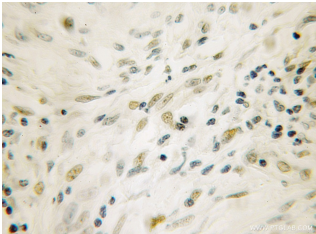
Size: 55 µg/150 µl

Source: Rabbit

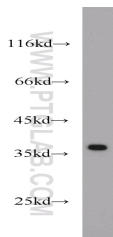
Isotype: IgG

Synonyms:

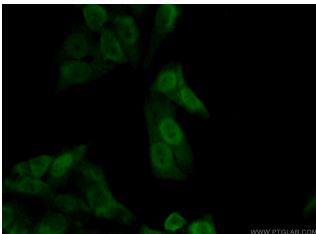
APEX1; AP endonuclease 1,
APE, APE1, APE1, APEX1,
APEN, APEX, APEX nuclease,
APEX1, APX, HAP1, Protein
REF 1, REF1



Immunohistochemical of paraffin-embedded human cervical cancer using 10323-1-AP (APEX1 antibody) at dilution of 1:50 (under 10x lens)



HepG2 cells were subjected to SDS PAGE followed by western blot with 10323-1-AP (APEX1 antibody) at dilution of 1:500



Immunofluorescent analysis of HepG2 cells using 10323-1-AP (APEX1 Antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)

Background

APEX1, also named as APE, APE1, HAP1 and REF-1, belongs to the DNA repair enzymes AP/ExoA family. It is a multifunctional protein that plays a central role in the cellular response to oxidative stress. The two major activities of APEX1 are in DNA repair and redox regulation of transcriptional factors. APEX nuclease is a DNA repair enzyme having apurinic/aprimidinic (AP) endonuclease, 3-prime,5-prime-exonuclease, DNA 3-prime repair diesterase, and DNA 3-prime-phosphatase activities. 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. APEX1 is involved in calcium-dependent down-regulation of parathyroid hormone (PTH) expression by binding to negative calcium response elements (nCaREs). When acetylated at Lys-6 and Lys-7, APEX1 stimulates the YBX1-mediated MDR1 promoter activity, leading to drug resistance. It also acts as an endoribonuclease involved in the control of single-stranded RNA metabolism. It 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, APEX1 plays a role in the rRNA quality control process during cell cycle progression. 10323-1-AP is a rabbit polyclonal antibody raised against a fusion protein corresponding to an internal region of human APEX1.

Applications

Tested applications:	ELISA, WB, IHC, IF
Species specificity:	Human, Mouse, Rat; other species not tested.
Calculated APEX1 MW:	36 kDa
Observed APEX1 MW:	36 kDa
Positive WB detected in	HepG2 cells, HEK-293 cells, K-562 cells, mouse liver tissue, Raji cells
Positive IHC detected in	Human cervical cancer tissue
Positive IF detected in	HepG2 cells
Recommended dilution:	WB: 1:200-1:2000 IHC: 1:20-1:200 IF: 1:20-1:200

Application key: WB = Western blotting, IHC = Immunohistochemistry, IF = Immunofluorescence, IP = Immunoprecipitation

Immunogen information

Immunogen:	Ag0397
GenBank accession number:	BC004979
Gene ID (NCBI):	328
Full name:	APEX nuclease (multifunctional DNA repair enzyme) 1

Product information

Purification method:	Antigen affinity purification
Storage:	PBS with 0.1% sodium azide and 50% glycerol pH 7.3. Store at -20°C.