

For Research Use Only

APEX1 Polyclonal antibody

Catalog Number: 10323-1-AP

Featured Product



Basic Information

Catalog Number:

10323-1-AP

Size:

150ul, Concentration: 800 ug/ml by Nanodrop and 367 ug/ml by Bradford method using BSA as the standard;

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG0397

GenBank Accession Number:

BC004979

GeneID (NCBI):

328

UNIPROT ID:

P27695

Full Name:

APEX nuclease (multifunctional DNA repair enzyme) 1

Calculated MW:

36 kDa

Observed MW:

36 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:500-1:1000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:20-1:200

IF/ICC 1:20-1:200

Applications

Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

Species Specificity:

human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB: HepG2 cells, HEK-293 cells, HeLa cells, HuH-7 cells, K-562 cells, mouse liver tissue, Raji cells

IP: HepG2 cells,

IHC: human cervical cancer tissue,

IF/ICC: HepG2 cells,

Background Information

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/apyrimidinic (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.

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

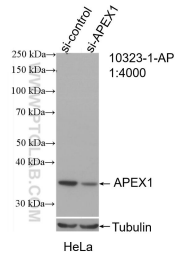
For technical support and original validation data for this product please contact:

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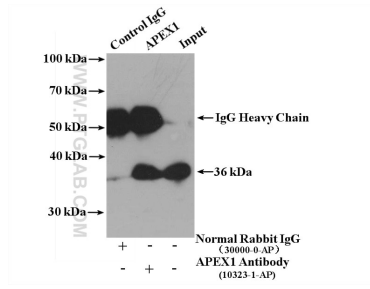
E: proteintech@ptglab.com
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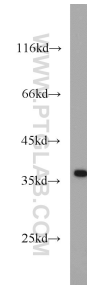
Selected Validation Data



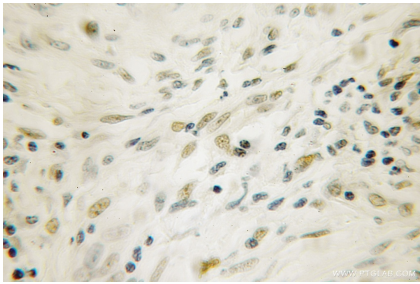
WB result of APEX1 antibody (10323-1-AP; 1:4000; incubated at room temperature for 1.5 hours) with sh-Control and sh-APEX1 transfected HeLa cells.



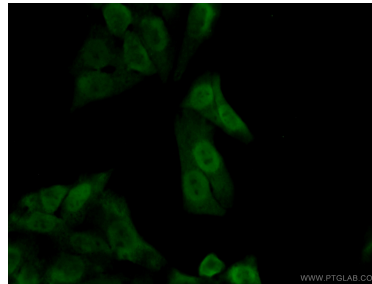
IP result of anti-APEX1 (IP:10323-1-AP, 4ug; Detection:10323-1-AP 1:500) with HepG2 cells lysate 2200 ug.



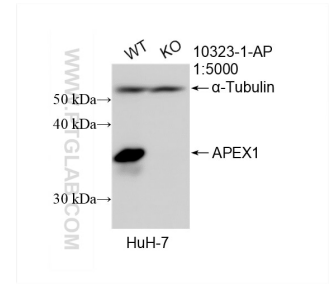
HepG2 cells were subjected to SDS PAGE followed by western blot with 10323-1-AP (APEX1 antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



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



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).



WB result of APEX1 antibody (10323-1-AP; 1:5000; room temperature for 1.5 hours) with wild-type and APEX1 knockout HuH-7 cells.