

APEX1 Polyclonal antibody

Catalog Number: 10203-1-AP

Featured Product

21 Publications

Basic Information

Catalog Number:

10203-1-AP

Size:

800 µg/ml

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG0251

GenBank Accession Number:

BC002338

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 1:500-1:2000

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

IHC 1:20-1:200

IF 1:50-1:500

Applications

Tested Applications:

IF/ICC, IHC, IP, WB, ELISA

Cited Applications:

WB, IF, IHC, CoIP

Species Specificity:

human, mouse, rat

Cited Species:

human, rat, mouse

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 : HeLa cells, mouse brain tissue

IP : HeLa cells,

IHC : human breast cancer tissue,

IF : MCF-7 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. 10203-1-AP is a rabbit polyclonal antibody raised against full length APE1 of human origin.

Notable Publications

Author	Pubmed ID	Journal	Application
Meng Chen	36096885	Cell Death Dis	WB
Wei Liang	31564904	Onco Targets Ther	WB
Jingjing Zhang	29066842	Sci Rep	IF

Storage

Storage:

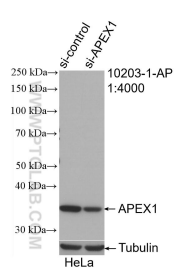
Store at -20°C. Stable for one year after shipment.

Storage Buffer:

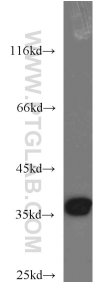
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

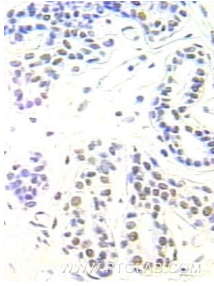
Selected Validation Data



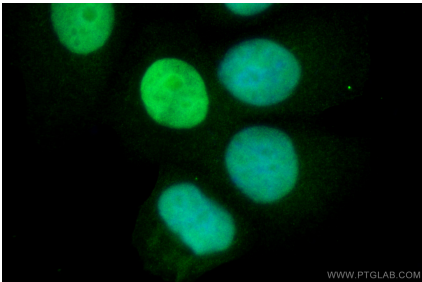
WB result of APEX1 antibody (10203-1-AP; 1:4000; incubated at room temperature for 1.5 hours) with sh-Control and sh-APEX1 transfected HeLa cells.



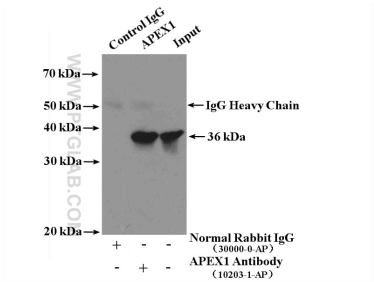
HeLa cells were subjected to SDS PAGE followed by western blot with 10203-1-AP (APEX1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human breast cancer using 10203-1-AP (APEX1 antibody) at dilution of 1:100 (under 25x lens).



Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using APEX1 antibody (10203-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



IP result of anti-APEX1 (IP:10203-1-AP, 4ug; Detection:10203-1-AP 1:1000) with HeLa cells lysate 1600ug.