

IHC*easy* APEX1 Ready-To-Use IHC Kit

Catalog Number: **KHC1569**

General Information

Sample type: FFPE tissue	Assay type: Immunohistochemistry
Cited sample type:	Primary antibody type: Mouse Monoclonal
Reactivity: Human, Mouse, Rat	Secondary antibody type: Polymer-HRP-Goat anti-Mouse
Cited Reactivity:	

Kit Component

Component	Size	Concentration
Antigen Retrieval Buffer	100 mL	50×
Washing Buffer	100 mL ×2	20×
Blocking Buffer	5 mL	RTU
Primary Antibody	5 mL	RTU
Secondary Antibody	5 mL	RTU
Chromogen Component A	0.2 mL	RTU
Chromogen Component B	4 mL	RTU
Signal Enhancer	5 mL	RTU
Counter Staining Reagent	5 mL	RTU
Mounting Media	5 mL	RTU
Control Slide	1 slide (Optional)	FFPE
Datasheet	1 Copy	
Manual	1 Copy	

Storage Instructions

All the reagents are stored at 2-8°C. The kit is stable for 6 months from the date of receipt.

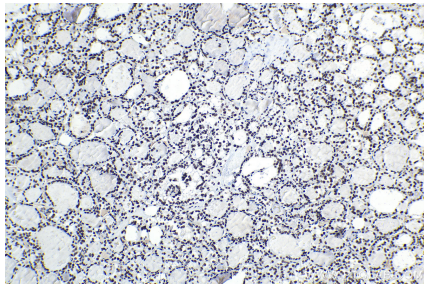
Background

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.

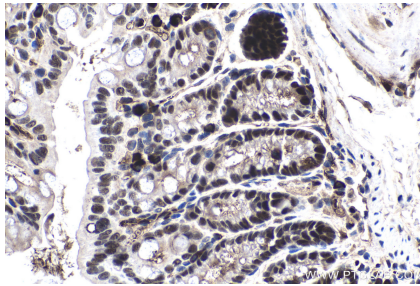
Synonyms

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

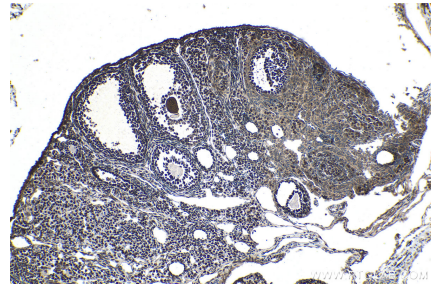
Selected Validation Data



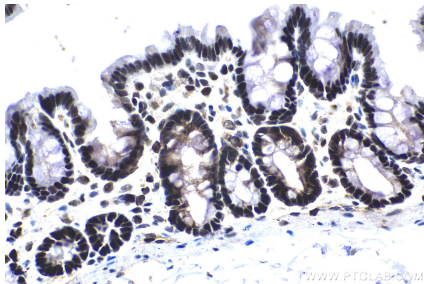
Immunohistochemical analysis of paraffin-embedded human thyroid cancer tissue slide using KHC1569 (APEX1 IHC Kit).



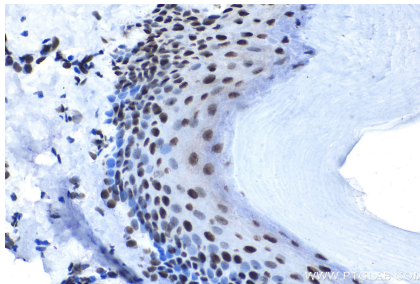
Immunohistochemical analysis of paraffin-embedded mouse colon tissue slide using KHC1569 (APEX1 IHC Kit).



Immunohistochemical analysis of paraffin-embedded mouse ovary tissue slide using KHC1569 (APEX1 IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat colon tissue slide using KHC1569 (APEX1 IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat skin tissue slide using KHC1569 (APEX1 IHC Kit).