Datasheet for ABIN6242774

anti-APEX1 antibody

4 Images

Go to Product page

Overview

Quantity:	200 µL
Target:	APEX1
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This APEX1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Immunogen:	This APEX1 antibody is generated from a mouse immunized with a recombinant protein of human APEX1.
Clone:	1518CT337-123-86-269-232
Isotype:	IgG1 kappa
Purification:	This antibody is purified through a protein G column, followed by dialysis against PBS.

Target Details

Target:	APEX1
Alternative Name:	APEX1 (APEX1 Products)
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.

Target Details

	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' exoribonuclease 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.
Molecular Weight:	35555
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:	IF: 1:25. WB: 1:2000. IHC: 1:50. IHC-P: 1:25

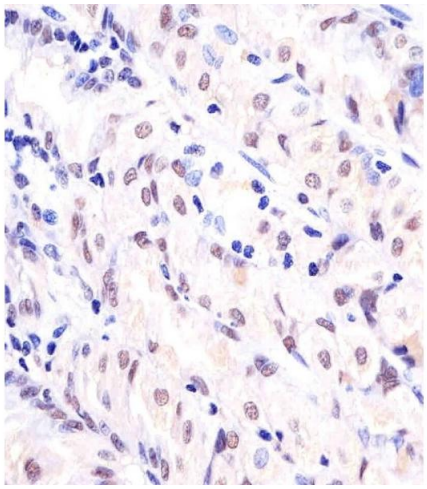
Application Details

Restrictions:	For Research Use only

Handling

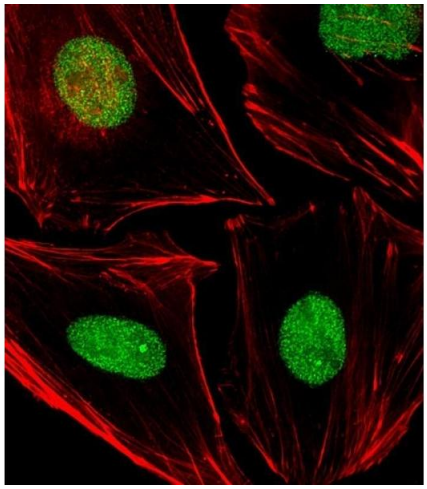
Format:	Liquid
Buffer:	Purified monoclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Expiry Date:	6 months

Images



Immunohistochemistry (Paraffin-embedded Sections)

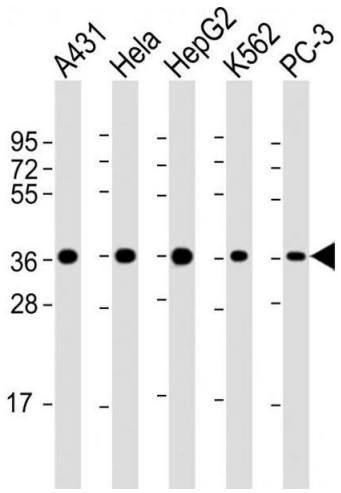
Image 1. (ABIN6242774 and ABIN6577127) staining EX1 in human stomach sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3 % BSA for 0. 5 hour at room temperature, antigen retrieval was by heat mediation with a citrate buffer (pH 6). Samples were incubated with primary antibody (1/25) for 1 hours at 37 °C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Immunofluorescence

Image 2. Immunofluorescent analysis of 4 % paraformaldehyde-fixed, 0.1 % Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling EX1 with (ABIN6242774 and ABIN6577127) at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing nucleus staining on HeLa cell line. Cytoplasmic actin is

detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).



Western Blotting

Image 3. All lanes : Anti-EX1 Antibody at 1:2000 dilution Lane 1: A431 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: HepG2 whole cell lysate Lane 4: K562 whole cell lysate Lane 5: PC-3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5 % NFDM/TBST.

Please check the product details page for more images. Overall 4 images are available for ABIN6242774.