

Datasheet for ABIN5692978
anti-APEX1 antibody (AA 2-318)



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2 Images

Overview

Quantity:	100 µg
Target:	APEX1
Binding Specificity:	AA 2-318
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This APEX1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Flow Cytometry (FACS)

Product Details

Purpose:	Anti-APE1 APEX1 Antibody Picoband® (monoclonal, 5C11)
Immunogen:	E.coli-derived human APE1 recombinant protein (Position: P2-L318). Human APE1 shares 94% and 93% amino acid (aa) sequence identity with mouse and rat APE1, respectively.
Clone:	5C11
Isotype:	IgG2b
Cross-Reactivity (Details):	No cross-reactivity with other proteins.
Characteristics:	Anti-APE1 APEX1 Antibody Picoband® (monoclonal, 5C11) (ABIN5692978). Tested in Flow Cytometry, IHC, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing

Product Details

antibodies are designated as Picoband, ensuring unmatched performance.

Target Details

Target:	APEX1
Alternative Name:	APEX1 (APEX1 Products)
Background:	Synonyms: DNA- (apurinic or apyrimidinic site) lyase, APEX nuclease, APEN, Apurinic-apyrimidinic endonuclease 1, AP endonuclease 1, APE-1, REF-1, Redox factor-1, DNA- (apurinic or apyrimidinic site) lyase, mitochondrial, APEX1, APE, APE1, APEX, APX, HAP1, REF1 Tissue Specificity: A major expression is found in the colonic epithelium. It is also abundant in the activated macrophages. Expressed in fetal membranes. Background: APEX1, also called apurinic endonuclease (APE), 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. The human APEX1 gene consists of 5 exons spanning 2.64 kb and exists as a single copy in the haploid genome. Using in situ hybridization, the APEX1 gene is mapped to 14q11.2-q12. The predicted APEX1 protein, which contained probable nuclear transport signals, was identified as a member of a family of DNA repair enzymes found in lower organisms. The abundance of the large form of APEX1 was increased in leiomyoma extracts relative to myometrial tissue extracts, and the large form was dominant in cell lines derived from leiomyosarcomas. The exonuclease activity of nuclear APEX1 can remove the anti-HIV nucleoside analogs AZT and D4T from the 3-prime terminus of a nick more efficiently than can cytosolic exonucleases.
Molecular Weight:	39 kDa
Gene ID:	328
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:	Western blot, 0.1-0.5 µg/mL
	Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/mL
	Immunohistochemistry (Frozen Section), 0.5-1 µg/mL
	Immunocytochemistry, 0.5-1 µg/mL
	Flow Cytometry (Fixed), 1-3 µg/1x10 ⁶ cells

Application Details

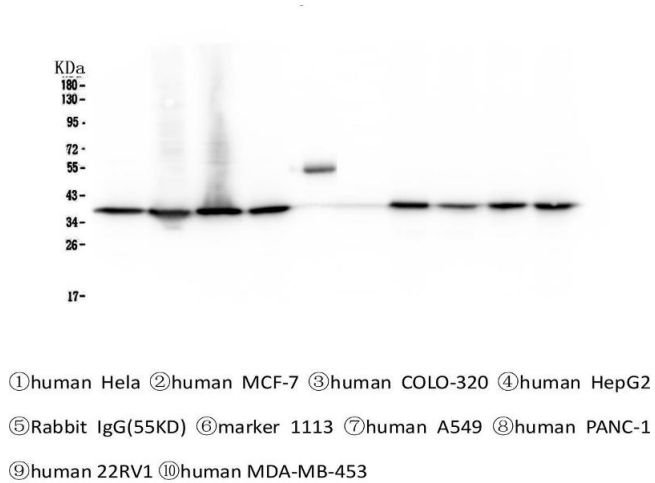
1. Akiyama, K., Seki, S., Oshida, T., Yoshida, M. C. Structure, promoter analysis and chromosomal assignment of the human APEX gene. Biochim. Biophys. Acta 1219: 15-25, 1994. 2. Chou, K.-M., Cheng, Y.-C. An exonucleolytic activity of human apurinic/aprimidinic endonuclease on 3-prime mispaired DNA. Nature 415: 655-659, 2002. 3. Robson, C. N., Hochhauser, D., Craig, R., Rack, K., Buckle, V. J., Hickson, I. D. Structure of the human DNA repair gene HAP1 and its localisation to chromosome 14q11.2-12. Nucleic Acids Res. 20: 4417-4421, 1992.

Restrictions: For Research Use only

Handling

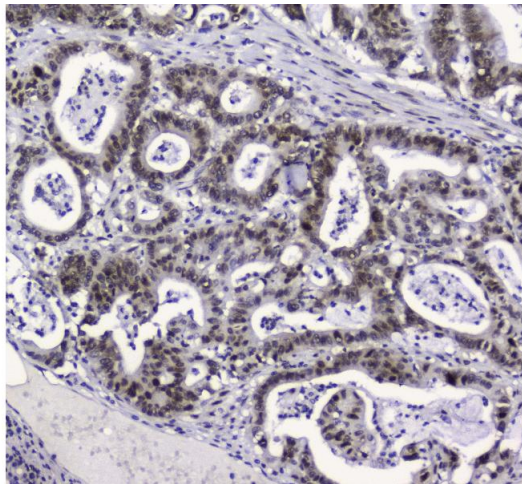
Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 µg/mL
Buffer:	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4, 0.05 mg Sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C, -20 °C
Storage Comment:	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

Images



Western Blotting

Image 1. Western blot analysis of APE1 using anti-APE1 antibody . Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each Lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human COLO-320 whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: Rabbit IgG, Lane 6: Marker



1113, Lane 7: human A549 whole cell lysates , Lane 8: human PANC-1 whole cell lysates, Lane 9: human 22RV1 whole cell lysates, Lane 10: human MDA-MB-453 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-APE1 antigen affinity purified monoclonal antibody (Catalog #) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a Biotin Conjugated goat anti-mouse IgG secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system.

Immunohistochemistry

Image 2. IHC analysis of APE1 using anti-APE1 antibody . APE1 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2µg/ml mouse anti-APE1 Antibody overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.