

Apurinic/aprimidinic endonuclease (human) monoclonal antibody (13B 8E5C2)

Mammalian apurinic/aprimidinic (AP) endonuclease (APE1; APEX; HAP1; Ref-1) is a multifunctional, bipartite enzyme that belongs to the class II AP endonucleases and that plays an important role in numerous, cellular functions, like repairing abasic sites (loss of purine or pyrimidine base) in DNA, regulating the redox state of other proteins that play roles in oxidative signalling, transcription factor regulation (Fos, Jun, NF- κ B, Myb, HIF-1 α , CREB, Pac), cell cycle control (p53) and apoptosis. APE1 initiates the DNA base excision repair (BER) by cleaving the DNA immediately adjacent to the 5' of an AP site to produce a hydroxyl group at the 3' terminus of an unmodified nucleotide upstream of the nick and a 5'-deoxyribose phosphate moiety downstream. The product of APE1 is further processed by DNA polymerase β to release 5'-deoxyribose phosphate with its intrinsic lyase activity. The nicked DNA is then sealed by DNA ligase I or DNA ligaseIII/XRCC1 to complete this repair process. In addition to the AP endonuclease activity, APE1 also possesses a 3'-5' DNA exonuclease activity, a 3'-phosphodiesterase activity, a 3'-phosphatase activity, and a RNase H activity. It has been shown that APE1 is capable of excision L-configuration deoxyribonucleoside analogs from the 3' termini of DNA. Human APE1 gene is located on chromosome 14q 11.2-12.

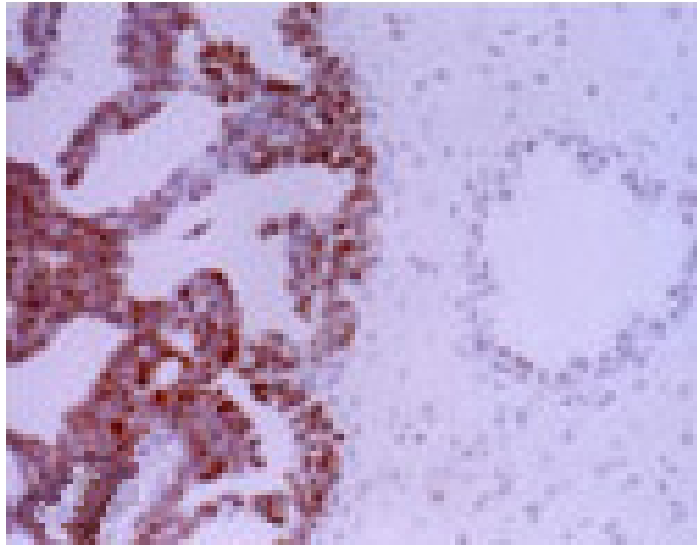
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Citations: 3

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Manuals, SDS & CofA

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Handling & Storage

Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	HAP1, APEX, APE1, Ref-1
Application	IHC (PS), IP, WB
Application Notes	Detects a band of ~37kDa by Western blot.
Clone	13B 8E5C2
Formulation	Liquid. In PBS containing 0.05% sodium azide.
Host	Mouse
Immunogen	Recombinant human APE1 (apurinic/aprimidinic endonuclease).
Isotype	IgG2a
Recommendation Dilutions/Conditions	Immunohistochemistry (paraffin sections, 1:100)Western Blot (1:1,000)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Species Reactivity	Human
UniProt ID	P27695

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