

Recombinant Human APEX1, T7-tagged

Cat. No. APEX1-955H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human APEX1 protein, fused to T7-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	APEX1, also known as REF1 or APE1 (Apurinic / apyrimidinic endonuclease), is responsible for the incision of DNA basic sites during base excision repair. It has also been shown to stimulate the DNA binding activity of numerous transcription factors that are involved in cancer promotion and progression. APEX1 is part of the cellular response to oxidative stress and protects cells from the genotoxic and cytotoxic effect of oxidizing agents.
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 0.2M NaCl, 2mM DTT, 10% glycerol.
Molecular Weight	36.9 kDa (332aa) confirmed by MALDI-TOF.
Purity	> 90% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Sequences Of Amino Acids	MASMTGGQQM GRGSMPCRKG KGAVAEDGDE LRTEPEAKKS KTKAAKNDKE AA GEGPALYE DPPDQKTSPS GKPATLKICS WNVDGLRAWI KKKGLDWVKE EAP

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DILCLQE TKCSENKLPV ELQELPGLSH QYWSAPSDKE GYSGVGLLSR QCP LKV
 SYGI GEEHDQEGR VIVAEFDSFV LVTAYVPNAG RGLVRLEYRQ RWDEAFKFL
 KGL ASRKPLV LCGDLNVAHE EIDLRNPKGN KKNAGFTPQE RQGFCELLQA VPL
 ADSFRHL YPNTPYAYTF WTYMMNARSK NVGWRLDYFL LSHLLPALC DSK IRSK
 ALG SDHCPITLYL AL.

Storage Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

Pathways Base excision repair; DNA Repair

GENE INFORMATION

Gene Name [APEX1 APEX nuclease \(multifunctional DNA repair enzyme\) 1 \[Homo sapiens \]](#)

Synonyms APEX nuclease (multifunctional DNA repair enzyme) 1; APE; APX; APE1; APEN; APEX; HAP1; REF1; APEX1; DNA-(apurinic or apyrimidinic site) lyase; AP lyase; protein REF-1; redox factor 1; AP endonuclease 1; AP endonuclease class I; apurinic/apyrimidinic exonuclease; multifunctional DNA repair enzyme; apurinic-apyrimidinic endonuclease 1; apurinic/apyrimidinic (abasic) endonuclease; deoxyribonuclease (apurinic or apyrimidinic); EC 4.2.99.18; APEX nuclease (multifunctional DNA repair enzyme); APE-1; REF-1; APEX nuclease 1; APEX nuclease

Gene ID [328](#)

mRNA Refseq [NM_001641](#)

Protein Refseq [NP_001632](#)

MIM [107748](#)

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UniProt ID P27695

Chromosome Location 14q11.2-q12

Function 3'-5' exonuclease activity; DNA binding; DNA-(apurinic or apyrimidinic site) lyase activity; endodeoxyribonuclease activity; endonuclease activity; lyase activity; metal ion binding; oxidoreductase activity; phosphodiesterase I activity; phosphoric diester hydrolase activity; protein binding; ribonuclease H activity; transcription coactivator activity; transcription corepressor activity; uracil DNA N-glycosylase activity

PDBrendering based on 1bix.



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