

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
ProteinLength	1-318 aa
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).

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Sequences Of Amino Acids

MASMTGGQQM GRGSMPKRGK KGAVAEDGDE LRTEPEAKKS KTAACKNDKE AA
GEGPALYE DPPDQKTSPS GKPATLKICS WNVDGLRAWI KKKGLDWVKE EAP
DILCLQE TKCSENKLPA ELQELPGLSH QYWSAPSDKE GYSGVGLLSR QCP LKV
SYGI GEEHDDQEGR VIVAEFDSFV LVTAYVPNAG RGLVRLEYRQ RWDEAFRKL
KGL ASRKPLV LCGDLNVAHE EIDLRNPKGN KKNAGFTPQE RQGFGEALLQA VPL
ADSRHL YPNTPYAYTF WTYMMNARSK NVGWRLDYFL LSHSLLPALC 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](#)

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MIM	107748
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.	