

Store at
-20°C

Ape1 (E5Y2C) Rabbit mAb



#10519

Support: +1-978-867-2388 (U.S.)
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orders@cellsignal.comEntrez-Gene ID #328
UniProt ID #P27695

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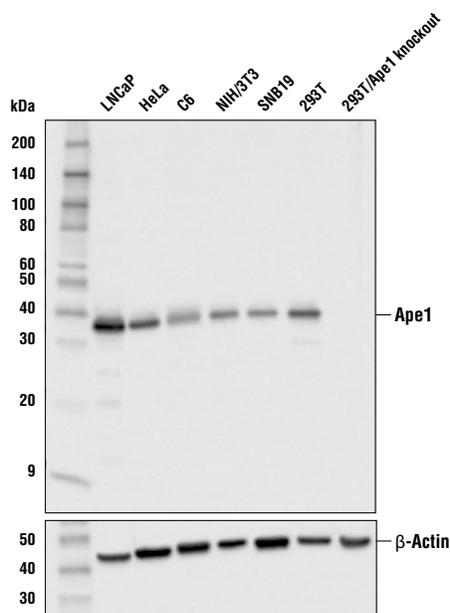
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Applications W Endogenous	Species Cross-Reactivity* H, M, R	Molecular Wt. 34 kDa	Isotype Rabbit IgG**
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Background: Ape1 (Apurinic/Apyrimidic eEndonuclease 1), also known as Ref1 (Redox effector factor 1), is a multifunctional protein with several biological activities. These include roles in DNA repair and in the cellular response to oxidative stress. Ape1 initiates the repair of abasic sites and is essential for the base excision repair (BER) pathway (1). Repair activities of Ape1 are stimulated by interaction with XRCC1 (2), another essential protein in BER. Ape1 functions as a redox factor that maintains transcription factors in an active, reduced state but can also function in a redox-independent manner as a transcriptional cofactor to control different cellular fates such as apoptosis, proliferation and differentiation (3). Increased expression of Ape1 is associated with many types of cancers including cervical, ovarian, prostate, rhabdomyosarcomas and germ cell tumors (4). Ape1 has been shown to stimulate DNA binding of several transcription factors known to be involved in tumor progression such as Fos, Jun, NF- κ B, PAX, HIF-1, HLF and p53 (4). Mutation of the Ape1 gene has also been associated with amyotrophic lateral sclerosis (ALS) (5,6).

Specificity/Sensitivity: Ape1 (E5Y2C) Rabbit mAb recognizes endogenous levels of total Ape1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro223 of human Ape1 protein.



Western blot analysis of extracts from various cell lines using Ape1 (E5Y2C) Rabbit mAb (upper) or β -Actin (D6A8) Rabbit mAb #8457 (lower). Lane 7 contains lysate from 293T cells with Ape1 knockout.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

- (1) Demple, B. and Sung, J.S. (2005) *DNA Repair (Amst)* 4, 1442-9.
- (2) Vidal, A.E. et al. (2001) *EMBO J* 20, 6530-9.
- (3) Tell, G. et al. *Antioxid Redox Signal* 7, 367-84.
- (4) Evans, A.R. et al. (2000) *Mutat Res* 461, 83-108.
- (5) Olkowski, Z.L. (1998) *Neuroreport* 9, 239-42.
- (6) Hayward, C. et al. (1999) *Neurology* 52, 1899-901.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween[®]20 at 4°C with gentle shaking, overnight.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.