

Ape2 (P-20): sc-66315



BACKGROUND

Ape2 (Apurinic-apyrimidinic endonuclease 2), also known as APEX nuclease 2 (APEXL2), AP endonuclease XTH2 or DNA-(apurinic or apyrimidinic site) lyase 2, is a member of the AP/exoA family of DNA repair enzymes. Ape2 is ubiquitously expressed and localizes to the nucleus and mitochondria. It is one of the two class II AP endonucleases expressed in mammals (along with Ref-1 (Ape1)). However Ape2 exhibits limited AP-endonuclease activity, and instead primarily functions as a 3'-5' exonuclease and a 3'-phosphodiesterase. Ape2 associates with PCNA (proliferating cell nuclear antigen) and may play a role in base excision repair (BER), eliminating damaged bases in genomic DNA. Growth retardation and G₂/M-phase arrest, exhibited by Ape2-null mice, suggest that Ape2 is also a key player in the proper progression of the cell cycle.

REFERENCES

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3. Gros, L., et al. 2002. Enzymology of the repair of free radicals-induced DNA damage. *Oncogene* 21: 8905-8925.
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CHROMOSOMAL LOCATION

Genetic locus: APEX2 (human) mapping to Xp11.21; Apex2 (mouse) mapping to X F3.

SOURCE

Ape2 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ape2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-66315 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-66315 X, 200 µg/0.1 ml.

APPLICATIONS

Ape2 (P-20) is recommended for detection of Ape2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ape2 (P-20) is also recommended for detection of Ape2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Ape2 siRNA (h): sc-61974, Ape2 siRNA (m): sc-61975, Ape2 shRNA Plasmid (h): sc-61974-SH, Ape2 shRNA Plasmid (m): sc-61975-SH, Ape2 shRNA (h) Lentiviral Particles: sc-61974-V and Ape2 shRNA (m) Lentiviral Particles: sc-61975-V.

Ape2 (P-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Ape2: 60 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.