SANTA CRUZ BIOTECHNOLOGY, INC.

COP1 (K-16): sc-34592

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The Power to Question

BACKGROUND

COP1 (constitutive photomorphogenesis protein 1), also designated RFWD2 (ring finger and WD repeat domain 2) or RNF200 (ring finger protein 200), is an E3 ubiquitin ligase protein that mediates ubiquitination and degradation of target proteins such as c-Jun and p53. It is a component of the DCX DET1-COP1 ubiquitin ligase complex which consists of RBX1, DET1, DDB1, CUL4A and COP1. Localizing to the cytoplasm and to the nucleus, COP1 is primarily expressed in testis, placenta, heart and skeletal muscle. COP1 is a potent inhibitor of p53-dependent transcription and apoptosis but, when phosphorylated by Atm (ataxia telangiectasia mutated) in response to DNA damage, the COP1-p53 complex is disrupted and p53 is allowed to exert its pro-apoptotic properties. In ovarian and breast cancers, COP1 is overexpressed, suggesting a role for COP1 in tumorigenesis.

REFERENCES

1. Dornan, D., et al. 2004. COP1, the negative regulator of p53, is overexpressed in breast and ovarian adenocarcinomas. Cancer Res. 64: 7226-7230.
2. Dornan, D., et al. 2004. The ubiquitin ligase COP1 is a critical negative regulator of p53. Nature 429: 86-92.
3. Faure, J., et al. 2004. ARF1 regulates Nef-induced CD4 degradation. Curr. Biol. 14: 1056-1064.
4. Feng, S., et al. 2004. *Arabidopsis* CAND1, an unmodified CUL1-interacting protein, is involved in multiple developmental pathways controlled by ubiquitin/proteasome-mediated protein degradation. Plant Cell 16: 1870-1882.

CHROMOSOMAL LOCATION

Genetic locus: RFWD2 (human) mapping to 1q25.1; Rfwd2 (mouse) mapping to 1 H1.

SOURCE

COP1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of COP1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-34592 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-34592 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

COP1 (K-16) is recommended for detection of COP1 of mouse, rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

COP1 (K-16) is also recommended for detection of COP1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for COP1 siRNA (h): sc-45541, COP1 siRNA (m): sc-45542, COP1 shRNA Plasmid (h): sc-45541-SH, COP1 shRNA Plasmid (m): sc-45542-SH, COP1 shRNA (h) Lentiviral Particles: sc-45541-V and COP1 shRNA (m) Lentiviral Particles: sc-45542-V.

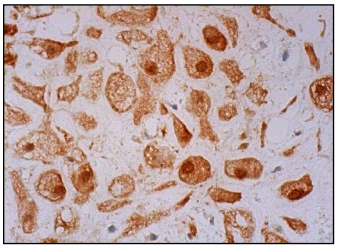
COP1 (K-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of COP1: 80 kDa.

Molecular Weight (observed) of COP1: 115 kDa.

Positive Controls: T24 cell lysate: sc-2292 or Caki-1 cell lysate: sc-2224.

DATA



COP1 (K-16): sc-34592. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of decidual cells.

SELECT PRODUCT CITATIONS

1. Savio, M.G., et al. 2008. COP1D, an alternatively spliced constitutive photomorphogenic-1 (COP1) product, stabilizes UV stress-induced c-Jun through inhibition of full-length COP1. Oncogene 27: 2401-2411.
2. Yu, J., et al. 2013. Modulation of fatty acid synthase degradation by concerted action of p38 MAP kinase, E3 ligase COP1, and SH2-tyrosine phosphatase Shp2. J. Biol. Chem. 288: 3823-3830.