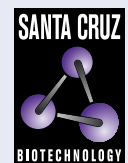


COP1 (B-12): sc-166799



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, CUL-4A 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

- Dornan, D., et al. 2004. COP1, the negative regulator of p53, is overexpressed in breast and ovarian adenocarcinomas. *Cancer Res.* 64: 7226-7230.
- Dornan, D., et al. 2004. The ubiquitin ligase COP1 is a critical negative regulator of p53. *Nature* 429: 86-92.
- Faure, J., et al. 2004. ARF1 regulates Nef-induced CD4 degradation. *Curr. Biol.* 14: 1056-1064.
- McMahon, H.T., et al. 2004. COP and clathrin-coated vesicle budding: different pathways, common approaches. *Curr. Opin. Cell Biol.* 16: 379-391.

CHROMOSOMAL LOCATION

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

SOURCE

COP1 (B-12) is a mouse monoclonal antibody raised against amino acids 432-731 mapping at the C-terminus of COP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-166799 X, 200 µg/0.1 ml.

COP1 (B-12) is available conjugated to agarose (sc-166799 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166799 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166799 PE), fluorescein (sc-166799 FITC), Alexa Fluor® 488 (sc-166799 AF488), Alexa Fluor® 546 (sc-166799 AF546), Alexa Fluor® 594 (sc-166799 AF594) or Alexa Fluor® 647 (sc-166799 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166799 AF680) or Alexa Fluor® 790 (sc-166799 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

COP1 (B-12) is recommended for detection of COP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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.

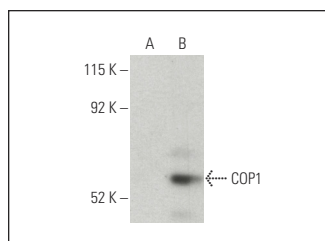
COP1 (B-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of COP1: 80 kDa.

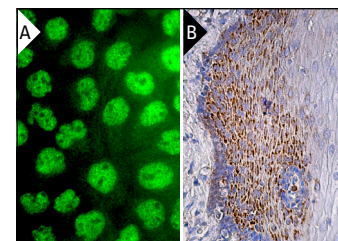
Molecular Weight (observed) of COP1: 115 kDa.

Positive Controls: COP1 (h): 293T Lysate: sc-115489, T24 whole cell lysate: sc-2292 or Caki-1 whole cell lysate: sc-2224.

DATA



COP1 (B-12): sc-166799. Western blot analysis of COP1 expression in non-transfected: sc-117752 (A) and truncated human COP1 transfected: sc-115489 (B) 293T whole cell lysates.



COP1 (B-12): sc-166799. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Ma, L., et al. 2014. Cluster of differentiation 166 (CD166) regulates cluster of differentiation (CD44) via NFκB in liver cancer cell line Bel-7402. *Biochem. Biophys. Res. Commun.* 451: 334-338.
- Peng, H.H., et al. 2022. ACK1 upregulated the proliferation of head and neck squamous cell carcinoma cells by promoting p27 phosphorylation and degradation. *J. Cell Commun. Signal.* 16: 567-578.
- Zeng, Y., et al. 2024. Gut microbiota-derived indole-3-propionic acid alleviates diabetic kidney disease through its mitochondrial protective effect via reducing ubiquitination mediated-degradation of SIRT1. *J. Adv. Res.* 13: S2090-1232(24)00361-8.

RESEARCH USE

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