SANTA CRUZ BIOTECHNOLOGY, INC.

CPPED1 (H-11): sc-514222

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Metallophosphoesterases (MPPEs) are dynamic enzymes that catalyze a variety of cellular reactions and contain a conserved β-α-β-α-β fold. The MPPE superfamily is divided into two subfamilies: phosphomonoesterases and phosphodiesterases. Each MPPE has a dimetal center located approximately at the C-terminal end of the parallel β-strands of the fold. CPPED1 (calcineurin-like phosphoesterase domain containing 1), also known as CSTP1 (complete S-transactivated protein 1) is a 314 amino acid protein that belongs to the MPPE superfamily and CPPED1 family. Existing as two alternatively spliced isoforms, CPPED1 is transactivated by Hep B virus and binds two divalent metal cations as cofactors. The gene encoding CPPED1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. Giant axonal neuropathy, Rubinstein-Taybi syndrome and Crohn's disease are associated with chromosome 16.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. Am. J. Hum. Genet. 52: 249-254.

CHROMOSOMAL LOCATION

Genetic locus: CPPED1 (human) mapping to 16p13.12; Cpped1 (mouse) mapping to 16 A1.

SOURCE

CPPED1 (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 47-71 within an internal region of CPPED1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CPPED1 (H-11) is available conjugated to agarose (sc-514222 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514222 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514222 PE), fluorescein (sc-514222 FITC), Alexa Fluor® 488 (sc-514222 AF488), Alexa Fluor® 546 (sc-514222 AF546), Alexa Fluor® 594 (sc-514222 AF594) or Alexa Fluor® 647 (sc-514222 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514222 AF680) or Alexa Fluor® 790 (sc-514222 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514222 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CPPED1 (H-11) is recommended for detection of CPPED1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CPPED1 siRNA (h): sc-93144, CPPED1 siRNA (m): sc-141917, CPPED1 shRNA Plasmid (h): sc-93144-SH, CPPED1 shRNA Plasmid (m): sc-141917-SH, CPPED1 shRNA (h) Lentiviral Particles: sc-93144-V and CPPED1 shRNA (m) Lentiviral Particles: sc-141917-V.

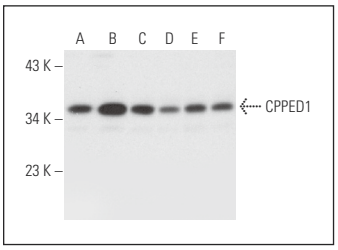
Molecular Weight of CPPED1 isoforms: 36/19 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

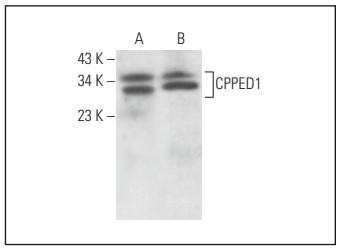
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CPPED1 (H-11): sc-514222. Western blot analysis of CPPED1 expression in Jurkat (**A**), K-562 (**B**), RT-4 (**C**), HeLa (**D**), ZR-75-1 (**E**) and JAR (**F**) whole cell lysates.



CPPED1 (H-11): sc-514222. Western blot analysis of CPPED1 expression in RT-4 (**A**) and HEL 92.1.7 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yang, R., et al. 2019. Combined transcriptome and proteome analysis of immortalized human keratinocytes expressing human papillomavirus 16 (HPV16) oncogenes reveals novel key factors and networks in HPV-induced carcinogenesis. mSphere 4: e00129-19.
2. Wang, Z., et al. 2022. The potential function of SP1 and CPPED1 in restenosis after percutaneous coronary intervention. J. Card. Surg. 37: 5111-5119.

RESEARCH USE

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