

## CCM3 (F-12): sc-365587



The Power to Question

## BACKGROUND

Programmed cell death (apoptosis) of nonessential cells is necessary for embryogenesis, metamorphosis, tissue turnover and proper development and function of the immune system. CCM3, also known as PDCD10, is a member of the family of programmed cell death proteins that regulate apoptotic pathways. CCM3 is an anti-apoptotic protein that is essential for proper vascular development and maturation. Through direct interaction with and positive regulation of MST-4 in the ERK pathway, CCM3 promotes proper cell growth and differentiation. Defects in the gene encoding CCM3 may be related to cerebral cavernous malformations 3 (CCM3), a disease characterized by vascular anomalies found in the central nervous system that can cause stroke, seizures and focal hemorrhages.

## CHROMOSOMAL LOCATION

Genetic locus: PDCD10 (human) mapping to 3q26.1; Pcdcd10 (mouse) mapping to 3 E3.

## SOURCE

CCM3 (F-12) is a mouse monoclonal antibody raised against amino acids 3-191 mapping within an internal region of CCM3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CCM3 (F-12) is available conjugated to agarose (sc-365587 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365587 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365587 PE), fluorescein (sc-365587 FITC), Alexa Fluor® 488 (sc-365587 AF488), Alexa Fluor® 546 (sc-365587 AF546), Alexa Fluor® 594 (sc-365587 AF594) or Alexa Fluor® 647 (sc-365587 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365587 AF680) or Alexa Fluor® 790 (sc-365587 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CCM3 (F-12) is recommended for detection of CCM3 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 CCM3 siRNA (h): sc-62084, CCM3 siRNA (m): sc-62085, CCM3 shRNA Plasmid (h): sc-62084-SH, CCM3 shRNA Plasmid (m): sc-62085-SH, CCM3 shRNA (h) Lentiviral Particles: sc-62084-V and CCM3 shRNA (m) Lentiviral Particles: sc-62085-V.

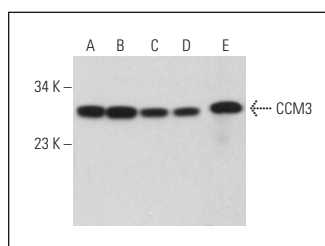
Molecular Weight of CCM3: 25 kDa.

Positive Controls: rat testis extract: sc-2400, K-562 whole cell lysate: sc-2203 or HEL 92.1.7 cell lysate: sc-2270.

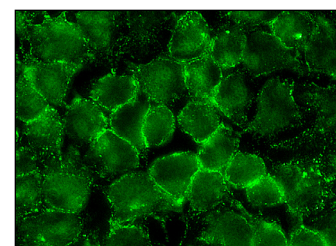
## RECOMMENDED SUPPORT REAGENTS

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



CCM3 (F-12): sc-365587. Western blot analysis of CCM3 expression in K-562 (A), HEL 92.1.7 (B), U-251-MG (C) and Neuro-2A (D) whole cell lysates and rat testis tissue extract (E).



CCM3 (F-12): sc-365587. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Jenny Zhou, H., et al. 2016. Endothelial exocytosis of angiotensin-2 resulting from CCM3 deficiency contributes to cerebral cavernous malformation. *Nat. Med.* 22: 1033-1042.
- Tan, P., et al. 2018. TRIM59 promotes breast cancer motility by suppressing p62-selective autophagic degradation of PDCD10. *PLoS Biol.* 16: e3000051.
- Li, D., et al. 2018. Striatin-1 is a B subunit of protein phosphatase PP2A that regulates dendritic arborization and spine development in striatal neurons. *J. Biol. Chem.* 293: 11179-11194.

## 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](http://www.scbt.com) for detailed protocols and support products.