

CCM3 (F-12): sc-365587

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; Pdc10 (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_{2a} 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.

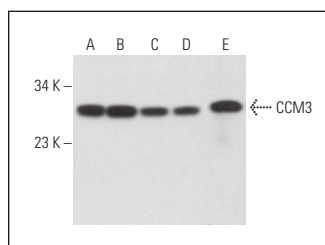
Molecular Weight of CCM3: 25 kDa.

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

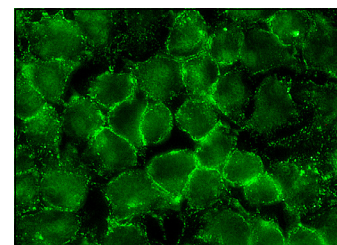
RECOMMENDED SUPPORT REAGENTS

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 angiopoietin-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 for detailed protocols and support products.