SANTA CRUZ BIOTECHNOLOGY, INC.

CCM3 (C-8): sc-365586

SANTA CRUZ BIOTECHNOLOGY

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.

REFERENCES

1. Guclu, B., et al. 2005. Mutations in apoptosis-related gene, PDCD10, cause cerebral cavernous malformation 3. Neurosurgery 57: 1008-1013.
2. Verlaan, D.J., et al. 2005. CCM3 mutations are uncommon in cerebral cavernous malformations. Neurology 65: 1982-1983.
3. Bergametti, F., et al. 2005. Mutations within the programmed cell death 10 gene cause cerebral cavernous malformations. Am. J. Hum. Genet. 76: 42-51.
4. Liquori, C.L., et al. 2006. Low frequency of PDCD10 mutations in a panel of CCM3 probands: potential for a fourth CCM locus. Hum. Mutat. 27: 118.
5. Dashti, S.R., et al. 2006. Molecular genetics of familial cerebral cavernous malformations. Neurosurg. Focus 21: e2.

CHROMOSOMAL LOCATION

Genetic locus: PDCD10 (human) mapping to 3q26.1; Pdcd10 (mouse) mapping to 3 E3.

SOURCE

CCM3 (C-8) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CCM3 (C-8) is available conjugated to agarose (sc-365586 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365586 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365586 PE), fluorescein (sc-365586 FITC), Alexa Fluor® 488 (sc-365586 AF488), Alexa Fluor® 546 (sc-365586 AF546), Alexa Fluor® 594 (sc-365586 AF594) or Alexa Fluor® 647 (sc-365586 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365586 AF680) or Alexa Fluor® 790 (sc-365586 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CCM3 (C-8) 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), 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 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.

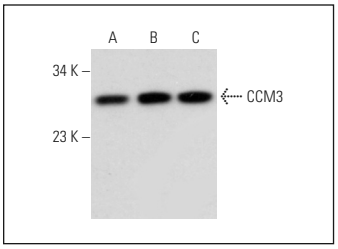
Molecular Weight of CCM3: 25 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, K-562 whole cell lysate: sc-2203 or CCRF-CEM cell lysate: sc-2225.

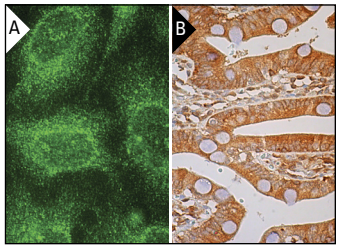
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CCM3 (C-8): sc-365586. Western blot analysis of CCM3 expression in K-562 (**A**), MCF7 (**B**) and CCRF-CEM (**C**) whole cell lysates.



CCM3 (C-8): sc-365586. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Mardakheh, F.K., et al. 2016. Rho binding to FAM65A regulates Golgi reorientation during cell migration. J. Cell Sci. 129: 4466-4479.

STORAGE

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