

CCM3 (L-20): sc-67908

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

- Bergametti, F., et al. 2004. Mutations within the programmed cell death 10 gene cause cerebral cavernous malformations. *Am. J. Hum. Genet.* 76: 42-51.
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- Liquori, C.L., et al. 2005. Low frequency of PDCD10 mutations in a panel of CCM3 probands: potential for a fourth CCM locus. *Hum. Mutat.* 27: 118.
- Verlaan, D.J., et al. 2005. CCM3 mutations are uncommon in cerebral cavernous malformations. *Neurology* 65: 1982-1983.
- Petit, N., et al. 2006. Patterns of expression of the three cerebral cavernous malformation (CCM) genes during embryonic and postnatal brain development. *Gene Expr. Patterns* 6: 495-503.
- Dashti, S.R., et al. 2006. Molecular genetics of familial cerebral cavernous malformations. *Neurosurg. Focus* 21: e2.
- Ma, X., et al. 2007. PDCD10 interacts with Ste20-related kinase MST-4 to promote cell growth and transformation via modulation of the ERK pathway. *Mol. Biol. Cell* 18: 1965-1978.
- Voss, K., et al. 2007. CCM3 interacts with CCM2 indicating common pathogenesis for cerebral cavernous malformations. *Neurogenetics* 8: 249-256.

CHROMOSOMAL LOCATION

Genetic locus: PDCD10 (human) mapping to 3q26.1; Pdc10 (mouse) mapping to 3 E3.

SOURCE

CCM3 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CCM3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67908 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CCM3 (L-20) is recommended for detection of CCM3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

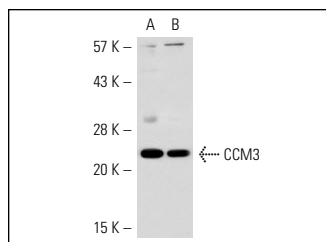
CCM3 (L-20) is also recommended for detection of CCM3 in additional species, including equine, canine, bovine, porcine and avian.

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.

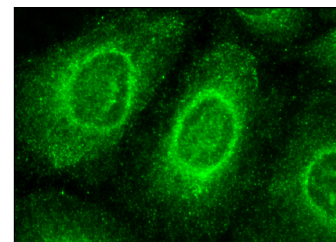
Molecular Weight of CCM3: 25 kDa.

Positive Controls: rat skeletal muscle tissue extract or mouse skeletal muscle tissue extract.

DATA



CCM3 (L-20): sc-67908. Western blot analysis of CCM3 expression in rat skeletal muscle (A) and mouse skeletal muscle (B) tissue extracts.



CCM3 (L-20): sc-67908. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Fidalgo, M., et al. 2010. CCM3/PDCD10 stabilizes GCKIII proteins to promote Golgi assembly and cell orientation. *J. Cell Sci.* 123: 1274-1284.

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.

MONOS
Satisfaction
Guaranteed

Try **CCM3 (C-8): sc-365586** or **CCM3 (F-12): sc-365587**, our highly recommended monoclonal alternatives to CCM3 (L-20).