



Anti-human CCM3

20140401BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	102-PA27S
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant human CCM3 (Met1-Ala212) from E. coli.

Target Background

Synonyms:	Cerebral cavernous malformations 3 protein, Programmed cell death protein 10, CCM3
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Cerebral cavernous malformations (CCMs) are sporadically acquired or inherited vascular lesions of the central nervous system consisting of clusters of dilated thin-walled blood vessels that predispose individuals to seizures and stroke. Mutations in CCM1, CCM2, or CCM3 lead to cerebral cavernous malformations, one of the most common hereditary vascular diseases of the brain. Endothelial cells within these lesions are the main disease compartments. Here, we show that adenoviral CCM3 expression inhibits endothelial cell migration, proliferation, and tube formation while down regulation of endogenous CCM3 results in increased formation of tube-like structures. Adenoviral CCM3 expression does not induce apoptosis under normal endothelial cell culture conditions but protects endothelial cells from staurosporine-induced cell death. Tyrosine kinase activity profiling suggests that CCM3 supports PDPK-1/Akt-mediated endothelial cell quiescence and survival (Schleider et al, Neurogenetics 12, 2011).

References

1. Schleider et al, Neurogenetics 12 (2011)
2. Fidalgo et al, J Cell Sci 123 (2010)
3. Dashti et al, Neurosurg Focus 21 (2006)
4. Revencu N and Vikkula M, J Med Genet 43 (2006)
5. Yadla et al, S, Neurosurg Focus 29 (2010)
6. Verlaan DJ et al, Neurology 26 (2002)
7. Liu et al, J Vasc Res 48 (2011)

Database References Antigen

Protein RefSeq:	NP_009148.2
Uniprot ID:	Q9BUL8
mRNA RefSeq:	NM_007217.3

Product Specifications

Species reactivity	human
Clone/Ab feature	rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant human CCM3 (RT #300-056)
Formulation	lyophilized
Buffer	5 mM PBS, pH 7.2

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot:	Use 1-5 µg/ml
IF/IHC	Use 1:200 (IF)

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Handling/Applications

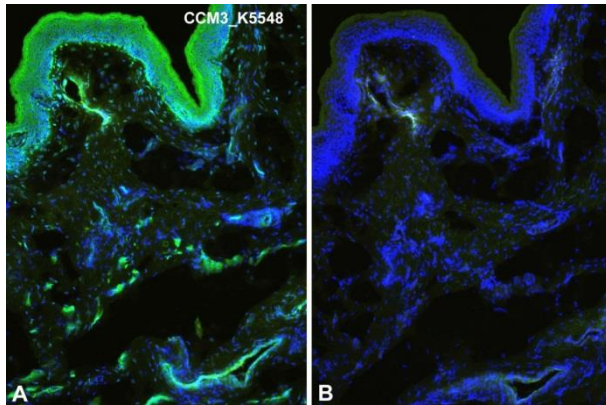
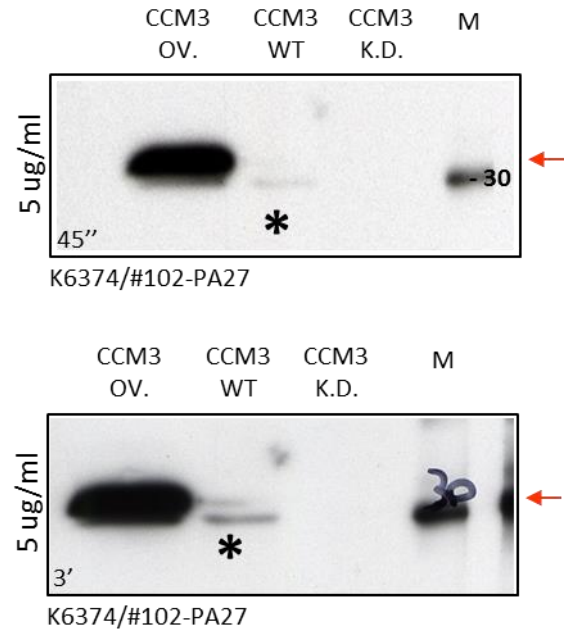


Figure 1: Immunofluorescence staining (green) of human foreskin (cryo-section of unfixed tissue) with anti-human CCM3 (K5548; dilution 1:50) [Cat# 102-PA27]. A) Note specific staining in the epidermis and in the wall of microvessels. B) Negative control of a consecutive section. Nuclei counterstained with Dapi (blue). Specimen provided by Prof. Dr. J. Wilting, Goettingen.

The experiment was performed by the research group of Prof. Dr. J. Wilting, University Göttingen, Germany.



K.O. = knock out (completely deleted)
K.D. = knock down (not completely deleted)
OV. = over expressed in COS1 cells

Figure 2. Western Analysis of anti-human CCM-3.

The experiment was performed by Elisabetta Dejana's group, IFOM-IEO-Campus, Milan Italy