



Recombinant Human CCM3



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	300-056
Size:	20 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	<i>PDCD10</i>
Synonyms:	Cerebral cavernous malformations 3 protein, Programmed cell death protein 10, CCM3

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.

The CCM-3 is fused to a N-terminal His-tag (6x His).

Sequence

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MGSSHHHHHHSSGLVPRGSMRMTMEEMKNEAETTSMVSMPLYAVMYPVFNEL  
ERVNLSAAQTLRAAFIKAEKENPGLTQDIIMKILEKKSVEVNFTESSLRMAA  
DDVEEYMIERPEPEFQDLNEKARALKQILSKIIPDEINDRVRFQLTIKDIASA  
IKELLDTVNNVFKKYQYQNRRALEHQKKEFVKYKSFSDTLKTYFKDGKAIN  
VFVSANRLIHQTNLILQTFKTV
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Database References

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

Product Specifications

Expressed in	E.coli
Purity	> 95% by SDS-PAGE & silver stain
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	231
MW:	26.7 kDa

Stability: The lyophilized human CCM3, though stable at room temperature, is best stored desiccated below 0°C.

Reconstitution: The lyophilized CCM3 is soluble in water and most aqueous buffers and should be reconstituted in water or PBS.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Positive control for Western blotting.

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)



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Handling/Application

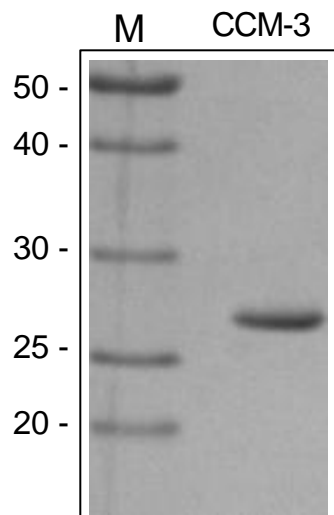


Figure 1. SDS-PAGE analysis of recombinant human CCM3. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Silver stain.