Anti-human ccbe1

20170821BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-PA36**
Size:	200 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with a highly pure (>95%) recombinant human ccbe1 fragment (Cys159-Leu251) derived from E. coli.

Target Background

Synonyms:	Collagen and calcium-binding EGF domain-containing protein 1

The lymphatic system comprises a vascular system separate from the cardiovascular system, essential for immune responses, fluid homeostasis and fat absorption. Lymphatic vessels develop in a complex process termed lymphangiogenesis that involves budding, migration and proliferation of lymphatic endothelial progenitor cells. A few genes, such as *FLT4*, *FOXC2* and *SOX18*, are known to be critically involved in lymph vessel formation in humans.
Lymphedema, lymphangiectasias, mental retardation and unusual facial characteristics define the autosomal recessive Hennekam syndrome. Homozygosity mapping identified a critical chromosomal region containing *ccbe1*, encoding Collagen and Calcium-Binding EGF-domain-1, a secreted protein which is required for embryonic lymphangiogenesis in zebrafish.
ccbe1 is not expressed in endothelial cells of lymph vessels, and it may be a component of the extracellular matrix. In zebrafish, *ccbe1* expression was observed along the earliest migration routes of endothelial cells that sprout from the posterior cardinal vein and migrate circuitously before developing into lymphatic vessels. *ccbe1* might therefore be involved in guidance of these migrating cells.

References

1. Karpanen T & Alitalo K, Annu Rev Pathol Dis 3, 2008
2. Oliver G & Alitalo K, Annu Rev Cell Dev Biol 21, 2005
3. Cueni LN & Detmar M, J Invest Dermatol 126, 2006
4. Fang J et al, Am J Hum Genet 67, 2000
5. Van Balkom ID et al, Am J Med Genet 112, 2002
6. Bellini C et al, Am J Med Genet. 120A, 2003
7. Hogan BM et al, Nat Genet 41, 2009
8. Maquat LE, Rev Mol Cell Biol 5, 2004
9. Yaniv K et al, Nat Med 12, 2006
10. Küchler AM et al, Curr Biol 16, 2006

Database References Antigen

Protein RefSeq:	NP_597716.1
Uniprot ID:	Q6UXH8
mRNA RefSeq:	NM_133459.3

Product Specifications

Species reactivity	human
Clone/Ab feature	Rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant human ccbe1 fragment (RT# 300-058)
Formulation	lyophilized
Buffer	PBS

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

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

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

Anti-human ccbe1

Handling/Applications

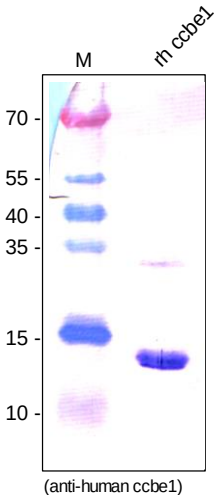

Fig. 1: Western Analysis of anti-human ccbe1. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions. Lane 1: MWM (kDa); lane 2: rh ccbe1.

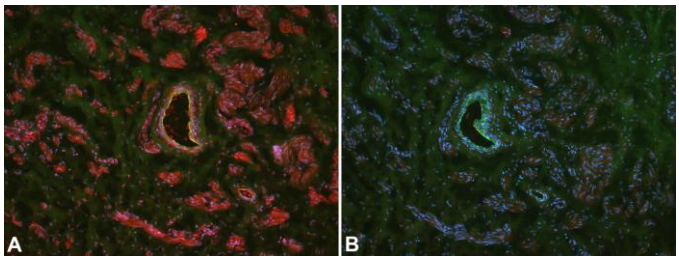

Fig. 2: Immunofluorescence staining (red) of ccbe1 in human foreskin tissue using a polyclonal rabbit anti-human ccbe1 antibody [**Cat# 102-PA36**] and counter staining of nuclei with Dapi. The section was fixed with 4% PFA for 25 min, the antibody was diluted 1:100. [B] Control without primary antibody (yellow in A and green in B correponds to the autofluorescence within the Membrana elastica interna of an artery). A signal is visible in fibrocytes, smooth muscle cells and probably in endothelial cells.

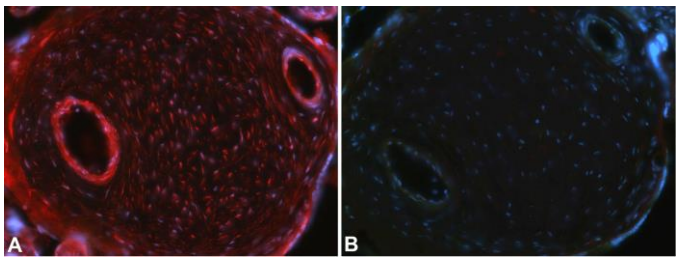

Fig. 3: Immunofluorescence staining (red) of ccbe1 in human placenta tissue using a polyclonal rabbit anti-human ccbe1 antibody [**Cat# 102-PA36]**. The section was fixed with 4% PFA for 25 min, the antibody was diluted 1:100. [B] Control without primary antibody. A signal is visible in fibrocytes, smooth muscle cells and probably in endothelial cells.

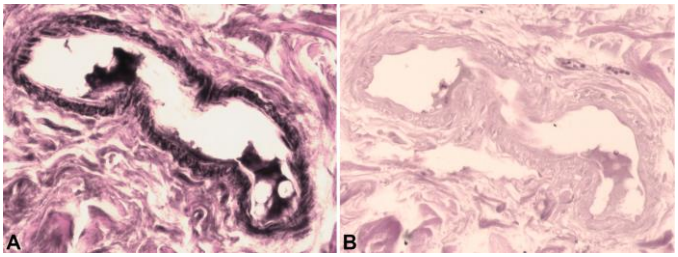

Fig. 4: Immunoperoxidase staining of ccbe1 in human skin using a polyclonal rabbit anti-human ccbe1 antibody [**Cat# 102-PA36]**. The section was fixed with 4% PFA overnight, the antibody was diluted 1:100. [B] Control without primary antibody. A signal is visible in smooth muscle cells, a little bit weaker in endothelial cells as well as in the connective tissue.

The IF experiments were performed by the research group of Prof. Dr. J. Wilting, University Göttingen, Germany.