

C2CD3 Antibody

Catalog # ASC11920

Product Information

Application	WB, E
Primary Accession	Q4AC94
Other Accession	NP_001273506 , 148596944
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	260389
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	C2CD3 antibody can be used for detection of C2CD3 by Western blot at 1 - 2 μ g/ml.

Additional Information

Gene ID	26005
Other Names	C2 domain-containing protein 3, C2CD3
Target/Specificity	C2CD3; C2CD3 antibody is human, mouse and rat reactive.
Reconstitution & Storage	C2CD3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	C2CD3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	C2CD3
Function	Component of the centrioles that acts as a positive regulator of centriole elongation (PubMed: 24997988). Promotes assembly of centriolar distal appendage, a structure at the distal end of the mother centriole that acts as an anchor of the cilium, and is required for recruitment of centriolar distal appendages proteins CEP83, SCLT1, CEP89, FBF1 and CEP164. Not required for centriolar satellite integrity or RAB8 activation. Required for primary cilium formation (PubMed: 23769972). Required for sonic hedgehog/SHH signaling and for proteolytic processing of GLI3.
Cellular Location	Cytoplasm, cytoskeleton, cilium basal body. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Note=Localizes to centrioles and procentrioles both in interphase and mitosis. Localizes to centriolar satellites, localization is dependent on PCM1 and dynein-mediated

retrograde transport. Also localizes to the distal ends of the mother and daughter centrioles

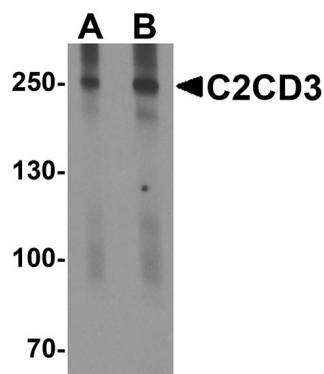
Background

C2CD3, a putative calcium-dependent lipid-binding protein, is an essential regulator of intracellular transduction of the Hedgehog signal (1). It is localized at the basal body of cilia, mediates calcium-dependent vesicular transport and/or recruitment of proteins and regulates cilium biogenesis by promoting the assembly of centriolar distal appendages critical for docking ciliary vesicles and recruiting other essential ciliogenic proteins (2,3). C2CD3 directly promotes centriole elongation and OFD1 acts as a negative regulator of C2CD3 (4,5).

References

- Hoover AN, Wynkoop A, Zeng H, et al. C2cd3 is required for cilia formation and Hedgehog signaling in mouse. *Development* 2008; 135:4049-58.
- Ye X, Zeng H, Ning G, et al. C2cd3 is critical for centriolar distal appendage assembly and ciliary vesicle docking in mammals. *Proc. Natl. Acad. Sci. USA* 2014; 111:2164-9.
- Thauvin-Robinet C, Lee JS, Lopez E, et al. The oral-facial-digital syndrome gene C2CD3 encodes a positive regulator of centriole elongation. *Nat. Genet.* 2014; 46:905-11.
- Balestra FR, Strnad P, Fluckiger I, et al. Discovering regulators of centriole biogenesis through siRNA-based functional genomics in human cells. *Dev. Cell* 2013; 25:555-71.

Images



Western blot analysis of C2CD3 in EL4 cell lysate with C2CD3 antibody at (A) 1 and (B) 2 µg/ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.