10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

C2CD3 Antibody
Catalog # ASC11920

Specification

C2CD3 Antibody - Product Information

Application	**WB**
Primary Accession	Q4AC94
Other Accession	NP_001273506, 148596944
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 216, 259 kDa** **Observed: 255 kDa KDa**
Application Notes	**C2CD3 antibody can be used for detection of C2CD3 by Western blot at 1 - 2 µg/ml.**

C2CD3 Antibody - Additional Information

Gene ID **26005**

Target/Specificity
C2CD3; C2CD3 antibody is human, mouse and rat reactive.

Reconstitution & Storage
C2CD3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
C2CD3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

C2CD3 Antibody - 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

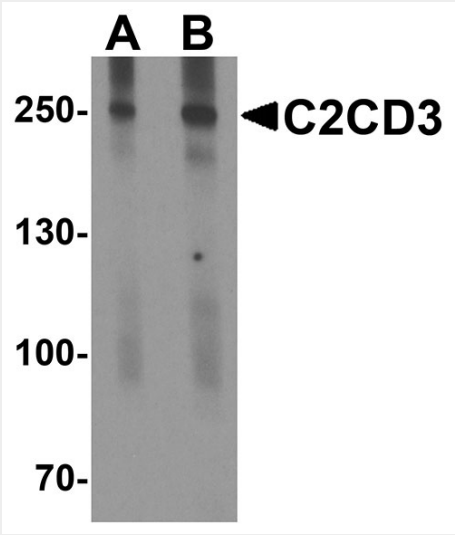
dynein-mediated retrograde transport. Also localizes to the distal ends of the mother and daughter centrioles

C2CD3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

C2CD3 Antibody - Images



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

C2CD3 Antibody - 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).

C2CD3 Antibody - 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.