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CRB2 Antibody
Catalog # ASC11590

Specification

CRB2 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q5IJ48
Other Accession	NP_775960, 112420992
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 141 kDa KDa**
Application Notes	**CRB2 antibody can be used for detection of CRB2 by Western blot at 1 - 2 µg/mL.**

CRB2 Antibody - Additional Information

Gene ID **286204**

Target/Specificity
CRB2; At least three isoforms of CRB2 are known to exist; this antibody will detect all three. CRB2 antibody is predicted to not cross-react with other members of the CRB family.

Reconstitution & Storage
CRB2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
CRB2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CRB2 Antibody - Protein Information

Name CRB2 (HGNC:18688)

Function
Apical polarity protein that plays a central role during the epithelial-to-mesenchymal transition (EMT) at gastrulation, when newly specified mesodermal cells move inside the embryo (By similarity). Acts by promoting cell ingression, the process by which cells leave the epithelial epiblast and move inside the embryo to form a new tissue layer (By similarity). The anisotropic distribution of CRB2 and MYH10/myosin-IIB at cell edges define which cells will ingress: cells with high apical CRB2 are probably extruded from the epiblast by neighboring cells with high levels of apical MYH10/myosin-IIB (By similarity). Plays a role in the maintenance of retinal neuroepithelium organization, structural integrity, adhesion, photoreceptor polarity and retinal photoreceptor layer thickness (By similarity). May play a role in determining the length of cone photoreceptor outer segments and proliferation of late-born progenitor cells (By similarity). Also required for maintenance of the apical polarity complex during development of the cortex (By similarity). Inhibits gamma-secretase- dependent cleavage of APP and secretion of amyloid-beta peptide 40 and amyloid-beta peptide 42, and thereby inhibits gamma-secretase-dependent Notch transcription (PubMed:<a href="http://www.uniprot.org/citations/20299451"

target="_blank">20299451).

Cellular Location
[Isoform 1]: Apical cell membrane {ECO:0000250|UniProtKB:Q80YA8}; Single-pass type I membrane protein. Cytoplasm {ECO:0000250|UniProtKB:Q80YA8}. Cell junction {ECO:0000250|UniProtKB:Q80YA8}. Note=O-glucosylation is required for localization at the apical plasma membrane (By similarity). Distributed in a complex anisotropic pattern on apical cell edges: the level of CRB2 on a cell edge is inversely correlated with the level of MYH10/myosin-IIB (By similarity). {ECO:0000250|UniProtKB:Q80YA8}

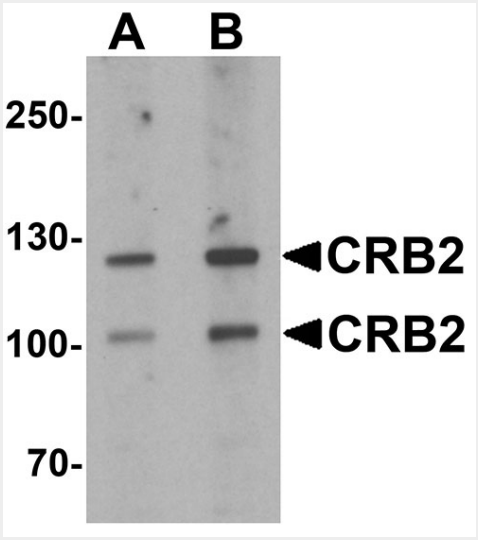
Tissue Location
Expressed in glomeruli, podocytes of the glomerular capillary loops, and parietal glomerular epithelial cells in the kidney (at protein level) (PubMed:27942854, PubMed:29473663). Expressed in retina, fetal eye and brain (PubMed:15851977). Also expressed in kidney, RPE/choroid, and at low levels in lung, placenta, and heart (PubMed:15851977).

CRB2 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

CRB2 Antibody - Images



Western blot analysis of CRB2 in rat brain tissue lysate with CRB2 antibody at 1 µg/mL

CRB2 Antibody - Background

CRB2 Antibody: CRB2 (Crumbs homolog 2), like its homologs CRB1 and CRB3, is similar to the Drosophila crumbs protein and is expressed in retina, brain and kidney. Along with other proteins,

the Crumbs proteins form a complex that help set up cell polarity in developing neuroepithelial cells. At the onset of neural specification, embryonic stem cells (ESCs) upregulate CRB2, which then localizes apically in neural rosettes. Gain- and loss-of-function studies of CRB2 have shown that CRB2 is essential for the stabilization of other polarity proteins. Unlike CRB1, mutations in CRB2 do not appear to play a role in retinitis pigmentosa or in Leber congenital amaurosis.

CRB2 Antibody - References

van den Hurk J, Rashbass P, Roepman R, et al. Characterization of the Crumbs homolog 2 (CRB2) gene and analysis of its role in retinits pigmentosa and Leber congenital amaurosis. Mol. Viso. 2005; 11:263-73
Bulgakova NA and Knust E. The Crumbs complex: from epithelial-cell polarity to retinal degeneration. J. Cell Sci. 2009; 122:2587-96.
Boroviak T and Rashbass P. The apical polarity determinant Crumbs 2 is a novel regulator of ESC-derived neural progenitors. Stem Cells 2011; 29:193-205
Bujakowska K, Audo I, Mohand-Said S, et al. CRB1 mutations in inherited retinal dystrophies. Hum. Mutat. 2012; 33:306-15