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CRB2 Rabbit pAb

Catalog # AP99254

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q5IJ48
Other Accession	Q5IJ48
Reactivity	Rat, Mouse
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	134265
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CRB2
Epitope Specificity	701-800/1285
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the Crumbs protein family. Contains 15 EGF-like domains. Contains 3 laminin G-like domains.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	CRB2 is a 1,285 amino acid protein that contains three laminin G-like domains and 15 EGF-like domains and exists as multiple alternatively spliced isoforms that are either secreted or membrane bound. Expressed in kidney and retina, as well as in fetal eye and brain, CRB2 is thought to play a role in the morphogenesis of polarized cells and may be involved in DNA repair. Defects in the gene encoding CRB2 are associated with the pathogenesis of autosomal recessive retinitis pigmentosa (RP) and Leber congenital amaurosis (LCA), the former of which refers to a group of diseases that lead to the degeneration of retinal photoreceptor cells, ultimately resulting in a loss of vision. The gene encoding CRB2 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

Additional Information

Gene ID	286204
Other Names	FSGS9; VMCKD; 5930402A21; RGD1309368; CRUM2_HUMAN; CRB2; Crumbs-like protein 2; CRUM2_MOUSE; crumbs2; crumbs cell polarity complex component 2; crumbs homolog 2 (Drosophila); crumbs family member 2
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

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: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).

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