

# FRMPD2 Antibody

Catalog # ASC11003

## Product Information

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|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>           | WB, E, IHC-P                                                                                                                                                          |
| <b>Primary Accession</b>     | <a href="#">Q68DX3</a>                                                                                                                                                |
| <b>Other Accession</b>       | <a href="#">NP_001018081</a> , <a href="#">281604114</a>                                                                                                              |
| <b>Reactivity</b>            | Human, Mouse, Rat                                                                                                                                                     |
| <b>Host</b>                  | Rabbit                                                                                                                                                                |
| <b>Clonality</b>             | Polyclonal                                                                                                                                                            |
| <b>Isotype</b>               | IgG                                                                                                                                                                   |
| <b>Calculated MW</b>         | 144282                                                                                                                                                                |
| <b>Concentration (mg/ml)</b> | 1 mg/mL                                                                                                                                                               |
| <b>Conjugate</b>             | Unconjugated                                                                                                                                                          |
| <b>Application Notes</b>     | FRMPD2 antibody can be used for detection of FRMPD2 by Western blot at 1 - 2 $\mu$ g/mL. Antibody can also be used for immunohistochemistry starting at 5 $\mu$ g/mL. |

## Additional Information

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| <b>Gene ID</b>                      | 143162                                                                                                                                                                                                                                         |
| <b>Other Names</b>                  | FERM and PDZ domain-containing protein 2, PDZ domain-containing protein 4, PDZ domain-containing protein 5C, FRMPD2, PDZD5C, PDZK4, PDZK5C                                                                                                     |
| <b>Target/Specificity</b>           | FRMPD2;                                                                                                                                                                                                                                        |
| <b>Reconstitution &amp; Storage</b> | FRMPD2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| <b>Precautions</b>                  | FRMPD2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                                                                              |

## Protein Information

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| <b>Name</b>     | FRMPD2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Synonyms</b> | PDZD5C, PDZK4, PDZK5C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Function</b> | Functions as a scaffold protein and likely plays a role in N- methyl-D-aspartic acid receptor (NMDAR)-mediated synaptic excitatory transmission (By similarity). May be involved in synapse formation in cone photoreceptor cells (By similarity). May play a role in the regulation of tight junction formation (PubMed: <a href="#">19706687</a> ). Binds phosphatidylinositol 3,4-bisphosphate (PtdIns(3,4)P2) (PubMed: <a href="#">19706687</a> ). May play a role in the regulation of NOD2-mediated NF-kappa-B activation in immune response |

(PubMed:[23213202](#)).

### Cellular Location

Cytoplasm. Basolateral cell membrane Cell junction, tight junction  
Postsynaptic density {ECO:0000250|UniProtKB:A0A140LI67} Note=Colocalizes with CTNNB1, CDH1 and PKP4 at the basolateral membrane. Colocalizes with TJP1 at tight junctions. Its recruitment to cell-cell contacts requires CDH1. Colocalizes with NOD2 to the basolateral membrane in intestinal epithelial cells (PubMed:23213202)

### Tissue Location

Expressed in epithelial cells.

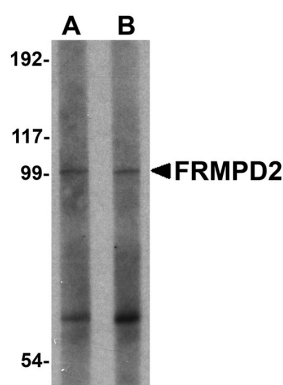
## Background

FRMPD2 Antibody: The FERM and PDZ domain containing (FRMPD) protein family consists of four proteins that contain a FERM (Four-point-one, erzin, radixin, moesin) domain and at least one PDZ (PSD-95/Discs large/Zonula-occludens-1) domain. FRMPD2 also contains an N-terminal KIND domain and three PDZ domains and is structurally similar to the protein tyrosine phosphatase PTP-BL. FRMPD2 is localized in a polarized fashion in epithelial cells at the basolateral membrane and partially co-localizes with the tight-junction marker protein Zonula-occludens-1. Suppression of FRMPD2 expression via RNAi in Caco-2 cells results in an impairment of tight junction formation, indicating that FRMPD2 plays a major role in tight junction formation. Other experiments indicate that FRMPD2 is a binding partner to several catenin family members and recruitment of FRMPD2 to cell-cell contacts is dependent on E-cadherin-mediated cell-cell adhesion.

## References

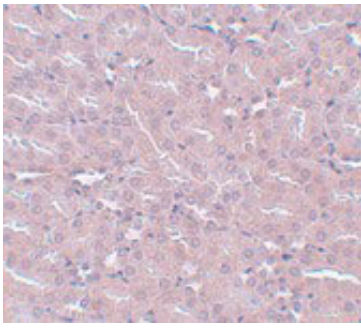
- An N, Blumer JB, Bernard ML. The PDZ and Band 4.1 containing protein Frmpd1 regulates the subcellular location of activator of G-protein signaling 3 and its interaction with G-proteins. *J. Biol. Chem.*2008; 283:24718-28.
- Stenzel N, Fetzer CP, Heumann R, et al. PDZ-domain-directed basolateral targeting of the peripheral membrane protein FRMPD2 in epithelial cells. *J. Cell Sci.*2009; 122:3374-84.
- Lee HW, Choi J, Shin H, et al. Preso, a novel PSD-95-interacting FERM and PDZ domain protein that regulates dendritic spine morphogenesis. *J. Neurosci.*2008; 28:14546-56.
- Erdmann KS. The protein tyrosine phosphatase PTP-Basophil/Basophil-like. Interacting proteins and molecular functions. *Eur. J. Biochem.*270:4789-98.

## Images



Western blot analysis of FRMPD2 in rat kidney tissue lysate with FRMPD2 antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of FRMPD2 in mouse kidney tissue with FRMPD2 antibody at 5 µg/mL.



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