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Datasheet for 600-401-BH7

# FRMPD4 Antibody

## Overview

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| **Description:** | Anti-FRMPD4 (RABBIT) Antibody - 600-401-BH7 |
| **Item No.:** | 600-401-BH7 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, IF, IHC, WB |
| **Reactivity:** | Human |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | 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-occuldens-1) domain. FRMPD4, also known as Preso, also contains another protein interaction domain termed WW (domain with two conserved Trp residues) at its amino terminus. It was identified through a yeast two-hybrid screen using the PDZ domain of PSD-95 as bait and is highly expressed in multiple regions of the brain and is enriched in the postsynaptic density (PSD) fractions. Overexpression of FRMPD4 in cultured hippocampal neurons significantly increased the linear density of dendritic spines without changing their length and width; conversely, knockdown experiments using RNAi caused a decrease in spine density, indicating FRMPD4 positively regulates dendritic spine density but not morphology. The decreased level of FRMPD4 also resulted in reduced levels of excitatory synaptic transmission, suggesting that FRMPD4 is required for maintenance of excitatory synaptic transmission. |
| **Synonyms:** | FERM and PDZ domain-containing protein 4, PDZ domain-containing protein 10, PSD-95-interacting regulator of spine morphogenesis, Preso, FRMPD4, KIAA0316, PDZD10, PDZK10 |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | FRMPD4 |
| **Reactivity:** | Human |

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| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | Anti-FRMPD4 antibody was prepared from whole rabbit serum produced by repeated immunizations with an 18 amino acid synthetic peptide from near the internal region of human FRMPD4. |
| **Purity/Specificity:** | Anti-FRMPD4 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with FRMPD4 from other sources has not been determined. |
| **Relevant Links:** | • UniProtKB - Q14CM0<br>• GeneID - 9758<br>• NCBI - NP_055543.2 |

## Application Details

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| **Tested Applications:** | ELISA, IF, IHC, WB |
| **Application Note:** | Anti-FRMPD4 Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 151 kDa in Western Blots of specific cell lysates and tissues. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:10,000 - 1:20,000 |
| **IF:** | 20 µg/mL |
| **IHC:** | 5 µg/mL |
| **WB:** | 1-2 µg/mL |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1 mg/mL by UV absorbance at 280 nm |
| **Buffer:** | 0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2 |
| **Preservative:** | 0.02% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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| **Shipping Condition:** | Wet Ice |

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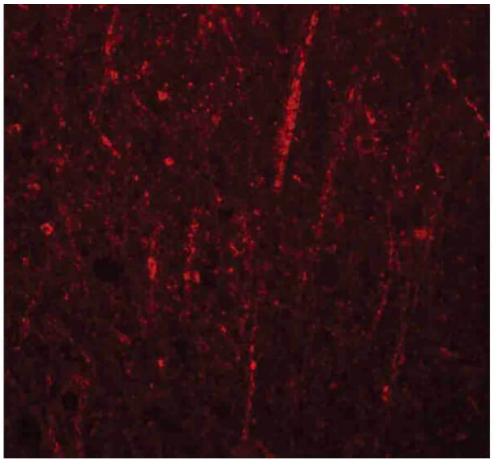
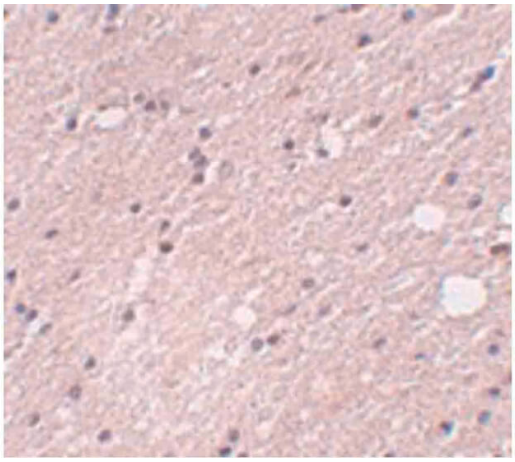
| **Storage Condition:** | Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

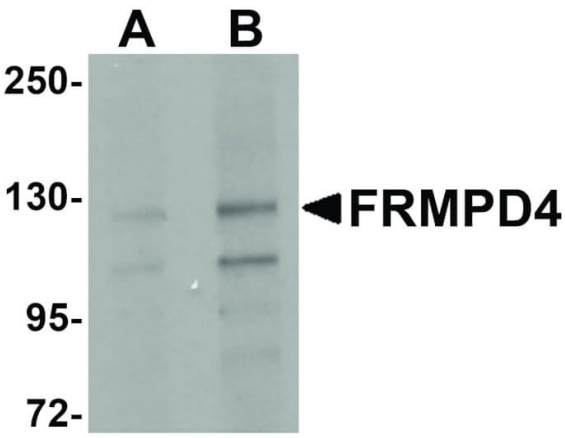
## Images



**Immunofluorescence Microscopy**
Immunofluorescence Microscopy of FRMPD4 antibody. Tissue: human brain tissue. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: FRMPD4 antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: FRMPD4 is a membrane protein. Staining: FRMPD4 as red fluorescent signal.



**Immunohistochemistry**
Immunohistochemistry of FRMPD4 antibody. Tissue: Human brain tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: FRMPD4 antibody at 5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: FRMPD4 is a membrane protein. Staining: FRMPD4 as precipitated brown signal with purple nuclear counterstain.




**Western Blot**

Western Blot of FRMPD4 antibody. Lane 1: SK-N-SH cell lysate with FRMPD4 antibody at 1 µg/mL. Lane 2: SK-N-SH cell lysate with FRMPD4 antibody at 2 µg/mL. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 151 kDa, 130 kDa for FRMPD4. Other band(s): FRMPD4 splice variants and isoforms.

## Disclaimer

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