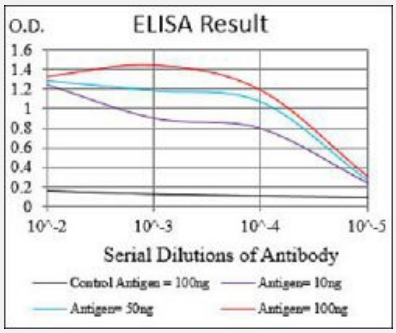
# PPP1R1B monoclonal antibody, clone 2A4G9

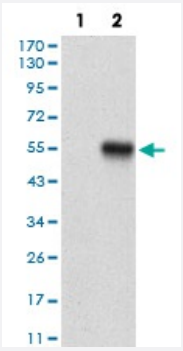
Catalog # MAB17784 Size 100 ug

## Applications




### Enzyme-linked Immunoabsorbent Assay

ELISA analysis of PPP1R1B monoclonal antibody, clone 2A4G9.




### Western Blot (Transfected lysate)

Western blot analysis of (1) HEK293 cells, (2) PPP1R1B-hIgGFc transfected HEK293 cell lysate with PPP1R1B monoclonal antibody.

## Specification

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|---|---|
| **Product Description** | Mouse monoclonal antibody raised against recombinant human PPP1R1B. |
| **Immunogen** | Recombinant protein corresponding to amino acids 95-204 of human PPP1R1B from *E. coli*. |
| **Host** | Mouse |
| **Theoretical MW (kDa)** | 23 |
| **Reactivity** | Human |
| **Form** | Liquid |
| **Isotype** | IgG1 |

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| **Recommend Usage** | ELISA (1:10000)<br>Flow Cytometry<br>Immunocytochemistry<br>Immunohistochemistry<br>Western Blot (1:500-1:2000)<br>The optimal working dilution should be determined by the end user. |
| **Storage Buffer** | In PBS (0.05% sodium azide). |
| **Storage Instruction** | Store at 4°C. For long term storage store at -20°C.<br>Aliquot to avoid repeated freezing and thawing. |
| **Note** | This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only. |

## Applications

- Enzyme-linked Immunoabsorbent Assay

  ELISA analysis of PPP1R1B monoclonal antibody, clone 2A4G9.

- Western Blot (Transfected lysate)

  Western blot analysis of (1) HEK293 cells, (2) PPP1R1B-hIgGFc transfected HEK293 cell lysate with PPP1R1B monoclonal antibody.

## Gene Info — PPP1R1B

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|---|---|
| **Entrez GeneID** | 84152 |
| **Gene Name** | PPP1R1B |
| **Gene Alias** | DARPP-32, DARPP32, FLJ20940 |
| **Gene Description** | protein phosphatase 1, regulatory (inhibitor) subunit 1B |
| **Omim ID** | 604399 |
| **Gene Ontology** | Hyperlink |

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|---|---|
| **Gene Summary** | Midbrain dopaminergic neurons play a critical role in multiple brain functions, and abnormal signaling through dopaminergic pathways has been implicated in several major neurologic and psychiatric disorders. One well-studied target for the actions of dopamine is DARPP32. In the densely dopamine- and glutamate-innervated rat caudate-putamen, DARPP32 is expressed in medium-sized spiny neurons (Ouimet and Greengard, 1990 [PubMed 2191086]) that also express dopamine D1 receptors (Walaas and Greengard, 1984 [PubMed 6319627]). The function of DARPP32 seems to be regulated by receptor stimulation. Both dopaminergic and glutamatergic (NMDA) receptor stimulation regulate the extent of DARPP32 phosphorylation, but in opposite directions (Halpain et al., 1990 [PubMed 2153935]). Dopamine D1 receptor stimulation enhances cAMP formation, resulting in the phosphorylation of DARPP32 (Walaas and Greengard, 1984 [PubMed 6319627]); phosphorylated DARPP32 is a potent protein phosphatase-1 (see MIM 176875) inhibitor (Hemmings et al., 1984 [PubMed 6087160]). NMDA receptor stimulation elevates intracellular calcium, which leads to activation of calcineurin and dephosphorylation of phospho-DARPP32, thereby reducing the phosphatase-1 inhibitory activity of DARPP32 (Halpain et al., 1990 [PubMed 2153935]).[ supplied by OMIM |
| **Other Designations** | OTTHUMP00000164276\|dopamine and cAMP regulated phosphoprotein\|dopamine and cAMP-regulated neuronal phosphoprotein 32\|protein phosphatase 1, regulatory (inhibitor) subunit 1B (dopamine and cAMP regulated phosphoprotein, DARPP-32) |

## Disease

- Alzheimer disease
- Anorexia Nervosa
- Attention Deficit Disorder with Hyperactivity
- Autistic Disorder
- Bipolar Disorder
- Breast cancer
- Breast Neoplasms
- Bulimia
- Cardiovascular Diseases
- Cognition
- Diabetes Mellitus
- Disease Models
- Edema
- Genetic Predisposition to Disease

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- Intelligence Tests
- Mental Disorders
- NARP
- Neuropsychological Tests
- Personality Tests
- Schizophrenia
- Schizophrenic Psychology
- Tobacco Use Disorder
- Weight Gain
- Werner syndrome

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