**Anti-PPP1R1A antibody [EP902Y] ab40877**

**Overview**

**Product name**  Anti-PPP1R1A antibody [EP902Y]

**Description**  Rabbit monoclonal [EP902Y] to PPP1R1A

**Host species**  Rabbit

**Tested applications**  Suitable for: WB, IP, Flow Cyt, ICC/IF, IHC-P

**Species reactivity**  Reacts with: Mouse, Rat, Human

**Immunogen**  Synthetic peptide within Human PPP1R1A aa 1-100 (N terminal). The exact sequence is proprietary.

**Positive control**  Brain tissue/lysate

**General notes**  Previously labelled as Protein phosphatase inhibitor 1.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents.

This product is a recombinant rabbit monoclonal antibody.

**Properties**

**Form**  Liquid

**Storage instructions**  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

**Storage buffer**  pH: 7.20

Preservative: 0.05% Sodium azide

Constituents: 0.1% BSA, 40% Glycerol, 9.85% Tris glycine, 50% Tissue culture supernatant

**Purity**  Tissue culture supernatant

**Clonality**  Monoclonal

**Clone number**  EP902Y

**Isotype**  IgG
**Function**
Inhibitor of protein-phosphatase 1. This protein may be important in hormonal control of glycogen metabolism. Hormones that elevate intracellular cAMP increase I-1 activity in many tissues. I-1 activation may impose cAMP control over proteins that are not directly phosphorylated by PKA. Following a rise in intracellular calcium, I-1 is inactivated by calcineurin (or PP2B). Does not inhibit type-2 phosphatases.

**Sequence similarities**
Belongs to the protein phosphatase inhibitor 1 family.

**Post-translational modifications**
Phosphorylation of Thr-35 is required for activity.

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**Applications**
Our Abpromise guarantee covers the use of ab40877 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/100000</td>
<td>Detects a band of approximately 27 kDa (predicted molecular weight: 19 kDa).</td>
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<tr>
<td>IP</td>
<td>1/50</td>
<td></td>
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<tr>
<td>Flow Cyt</td>
<td>1/20</td>
<td>ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 5 µg/ml.</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
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</tbody>
</table>

**Target**

**Function**
Inhibitor of protein-phosphatase 1. This protein may be important in hormonal control of glycogen metabolism. Hormones that elevate intracellular cAMP increase I-1 activity in many tissues. I-1 activation may impose cAMP control over proteins that are not directly phosphorylated by PKA. Following a rise in intracellular calcium, I-1 is inactivated by calcineurin (or PP2B). Does not inhibit type-2 phosphatases.

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**Images**

Anti-PPP1R1A antibody [EP902Y] (ab40877) at 1/40000 dilution + Rat brain at 10 µg

**Predicted band size:** 19 kDa

**Observed band size:** 27 kDa

*why is the actual band size different from the predicted?*

Western blot - Anti-PPP1R1A antibody [EP902Y] (ab40877)
Immunohistochemical analysis of paraffin-embedded human normal brain tissue using ab40877 diluted 1:100.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

ICC/IF image of ab40877 stained PC12 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab40877, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Overlay histogram showing SH-SY5Y cells stained with ab40877 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab40877, 1/20 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol/permeabilized in 0.1% PBS-Tween used under the same conditions.

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