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Product datasheet

Anti-PP1C gamma antibody ab16387

5 References

Overview

Product name	Anti-PP1C gamma antibody
Description	Sheep polyclonal to PP1C gamma
Host species	Sheep
Specificity	No cross reactivity with other recombinant pp1 isoforms.
Tested applications	**Suitable for:** IP, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Cow, Xenopus laevis
Immunogen	Synthetic peptide: TPPRGMITKQAKK conjugated to KLH, corresponding to amino acids 311-323 of Human PPP1G1. Run BLAST with Run BLAST with
Positive control	Recombinant Human PP1C gamma protein (**ab114828**) can be used as a positive control in WB.
General notes	A protein phosphatase is a phosphatase enzyme that removes a phosphate group from the phosphorylated amino acid residue of its substrate protein. Protein phosphorylation is one of the most common forms of reversible protein posttranslational modification (PTM), with up to 30% of all proteins being phosphorylated at any given time. Protein kinases (PKs) are the effectors of phosphorylation and catalyse the transfer of a γ-phosphate from ATP to specific amino acids on proteins. Several hundred PKs exist in mammals and are classified into distinct super-families. Proteins are phosphorylated predominantly on Ser, Thr and Tyr residues, which account for 79.3, 16.9 and 3.8% respectively of the phosphoproteome, at least in mammals. In contrast, protein phosphatases (PPs) are the primary effectors of dephosphorylation and can be grouped into three main classes based on sequence, structure and catalytic function. The largest class of PPs is the phosphoprotein phosphatase (PPP) family comprising PP1, PP2A, PP2B, PP4, PP5, PP6 and PP7, and the protein phosphatase Mg^{2+} or Mn^{2+}-dependent (PPM) family, composed primarily of PP2C. Source: The immunogen used to generate the purified antibody was a peptide conjugated to KLH corresponding to the sequence NH2-Thr-Pro-Pro-Arg-Gly-Met-Ile-Thr-Lys-Gln-Ala-Lys-Lys-COOH. This peptide antibody corresponds to C -terminal peptide of PP1 gamma 1 catalytic subunit having a MW of 37kD. The sequence used is amino acid 311-323. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.08% Sodium azide Constituent: PBS
Purity	Ammonium Sulphate Precipitation
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab16387 in the following tested applications.

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

Application	Abreviews	Notes
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration.

Target

Function	Protein phosphatase 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Involved in regulation of ionic conductances and long-term synaptic plasticity. May play an important role in dephosphorylating substrates such as the postsynaptic density-associated Ca(2+)/calmodulin dependent protein kinase II. Component of the PTW/PP1 phosphatase complex, which plays a role in the control of chromatin structure and cell cycle progression during the transition from mitosis into interphase.
Sequence similarities	Belongs to the PPP phosphatase family. PP-1 subfamily.
Cellular localization	Cytoplasm. Nucleus. Nucleus > nucleolus. Nucleus > nucleoplasm. Nucleus speckle. Chromosome > centromere > kinetochore. Cleavage furrow. Midbody. Colocalizes with SPZ1 in the nucleus (By similarity). Rapidly exchanges between the nucleolar, nucleoplasmic and cytoplasmic compartments. Highly mobile in cells and can be relocalized through interaction with targeting subunits. In the presence of PPP1R8 relocalizes from the nucleolus to nuclear speckles. Shows a dynamic targeting to specific sites throughout the cell cycle. Highly concentrated in nucleoli of interphase cells and localizes at kinetochores early in mitosis. Relocalization to chromosome-containing regions occurs at the transition from early to late anaphase. Also accumulates at the cleavage furrow and midbody by telophase.

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