abcam

Product datasheet

Anti-PIP2 antibody [2C11] ab11039

4 Abreviews 17 References 4 Images

Overview

Product name	Anti-PIP2 antibody [2C11]
Description	Mouse monoclonal [2C11] to PIP2
Host species	Mouse
Specificity	Reacts with PtdIns(4,5)P2, Ptd(4)P and Ptd(3,4,5)P3.
Tested applications	**Suitable for:** IHC-P, ICC/IF, ELISA, Neutralising, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Liposomes (prepared in PBS with lipid A, phosphatidylcholine (PC) and cholesterol) containing synthetic di-palmitoyl PtdIns(4,5)P2.
Positive control	IHC-P: FFPE human kidney normal and FFPE mouse normal brain. ICC: HepG2 cell line, Neuro2a cell line
General notes	This antibody clone is manufactured by Abcam. For testing in lipid dot blot assay, follow the protocol used in Thomas *et al*. *Biochem Soc Trans* 27:648-52 (1999) (PMID: 10917659, please see the References tab). If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine Some batches contain 6.97% L-Arginine as a stabilizing agent. For lot-specific buffer information, please contact our Scientific Support team.
Purity	Protein A purified
Clonality	Monoclonal
Clone number	2C11

Myeloma	Sp2/0-Ag14
Isotype	IgM

Applications

Our Abpromise guarantee covers the use of **ab11039** in the following tested applications.

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

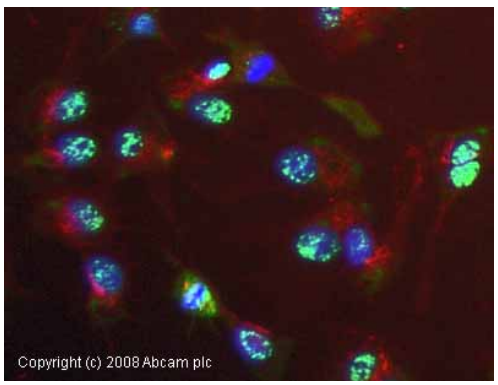
Application	Abreviews	Notes
IHC-P		Use a concentration of 1 - 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF	★★★★☆	Use a concentration of 1 - 5 µg/ml.
ELISA		Use at an assay dependent concentration.
Neutralising		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration. PubMed: 24214978

Target

Relevance

Phosphatidylinositol 4,5-biphosphate (PIP2) is a membrane phospholipid that has been implicated in a variety of cellular processes, including synaptic vesicle recycling and signal transduction pathways. PLCD4 hydrolyzes PIP2 to generate 2 second messenger molecules diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3).

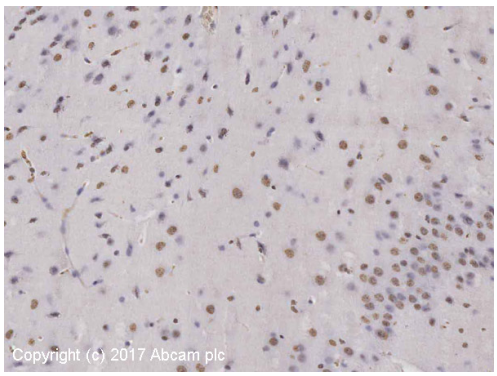
Images



Immunocytochemistry/ Immunofluorescence - Anti-PIP2 antibody [2C11] (ab11039)

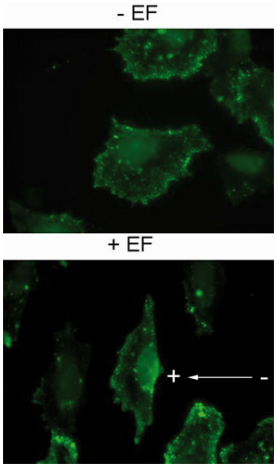
ICC/IF image of ab11039 stained human HepG2 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab11039, 5 µg/ml) overnight at +4°C.

The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgM (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). This antibody also gave a positive IF result in HeLa, Hek293 and MCF7 cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PIP2 antibody [2C11] (ab11039)

IHC image of PIP2 staining in mouse normal brain formalin fixed paraffin embedded tissue section. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins. The section was incubated with ab11039, 1µg/ml overnight at +4°C. An HRP-conjugated secondary (Ab98679, 1/1000 dilution) was used for 1hr at room temperature. The section was counterstained with haematoxylin and mounted with DPX.

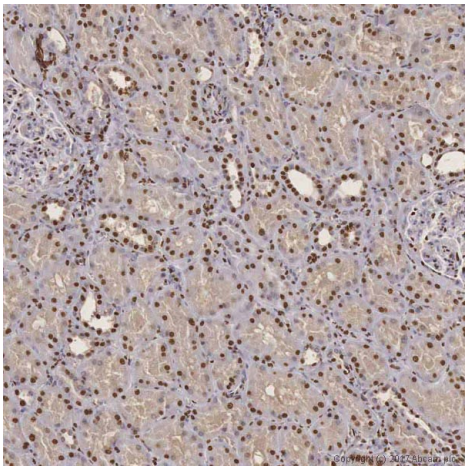


Immunocytochemistry/ Immunofluorescence - Anti-PIP2 antibody [2C11] (ab11039)

Image from Ozkucur N et al., BMC Cell Biol. 2011 Jan 22;12:4. Fig S4.; doi:10.1186/1471-2121-12-4; 22 January, 2011, BMC Cell Biology 2011, 12:4

Immunofluorescence analysis of Human SaOS-2 (Human osteosarcoma) cells, staining PIP2 with ab11039. Cells were either unstimulated (upper panel) or stimulated with direct current (lower panel).

Cells were fixed in formaldehyde, permeabilized and then blocked with 1% BSA for 20 min. Cells were then incubated with a primary antibody (1/200) overnight at 4°C. A FITC-conjugated anti-mouse IgG was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PIP2 antibody [2C11] (ab11039)

IHC image of PIP2 staining in a formalin fixed, paraffin embedded human normal kidney tissue section*, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab11039, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

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