

## Anti-p-PLCgamma2 [pY759]-144Nd

**Catalog #:** 3144015A

**Package Size:** 50 tests

**Storage:** Store product at 4°C. Do not freeze.

**Cross Reactivity:** Human, Predicted\*

**Clone:** K86-689.37

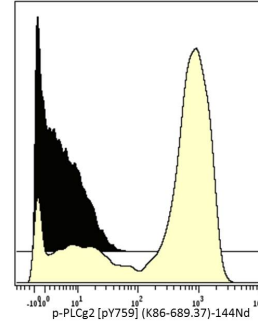
**Isotype:** Mouse IgG1

**Formulation:** Antibody stabilizer with 0.05% Sodium Azide

### Technical Information

**Validation:** Each lot of conjugated antibody is quality control tested by CyTOF® analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

**Recommended Usage:** The suggested use is 1 µl for up to 3 X 10<sup>6</sup> live cells in 100 µl. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Human Ramos B cells were incubated for 15 minutes in media alone (top) or with pervanadate (bottom). Cells were then fixed, permeabilized, and stained with 144Nd-anti-p-PLCγ2 [pY759] (K86-689.37).

### Description

A major signaling mediator downstream of receptor tyrosine kinase (RTK) pathways is phospholipase C (PLC), a family of cytoplasmic proteins that cleave phospholipids to activate the subsequent signal transduction pathways. Upon activation by RTKs or G protein-coupled receptors (GPCRs), PLC cleaves the phospholipid phosphatidylinositol 4,5-bisphosphate (PIP<sub>2</sub>) into diacyl glycerol (DAG) and inositol 1,4,5-trisphosphate (IP<sub>3</sub>), which activates the calcium-dependent protein kinase C (PKC) and Ca<sup>2+</sup> release from the endoplasmic reticulum (ER) to the cytoplasm. PKC and calcium spike in turn activate downstream effectors to mediate various cellular changes and activities. A total of 13 different PLC family members, divided into six classes, have been identified in humans, including β, γ, δ, ε, η, and ζ, and each has a specific tissue distribution. PLC-γ has two isoforms, PLC-γ1 and PLC-γ2. PLC-γ1 is expressed ubiquitously and has an essential role in growth and development, while PLC-γ2 is expressed mainly in hematopoietic cells and plays an essential role in B cell development and function.

### References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81:6813-6822, 2009.

Ornatsky, O. I., et al. Highly multiparametric analysis by mass cytometry. *J Immunol Methods* 361 (1-2):1-20, 2010.

### Contact Information:

Sales: [sales@DVSsciences.com](mailto:sales@DVSsciences.com) | Support: [support@DVSsciences.com](mailto:support@DVSsciences.com)  
[www.DVSsciences.com](http://www.DVSsciences.com) | For assistance by phone: 855-DVS-CYTO

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