

# Anti-Phospho-SHP-2-141Pr

Catalog: 3141002A

Clone: D66F10

Package Size: 50 tests

Isotype: IgG

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

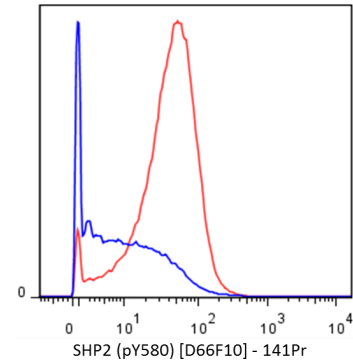
Formulation: Antibody stabilizer with 0.05% Sodium Azide

Reactivity: Rat, Mouse, Human,

## Technical Information

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

**Recommended Usage:** The suggested use is 1  $\mu$ l for up to  $3 \times 10^6$  live cells in 100  $\mu$ l. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Human Jurkat T cells were incubated for 15 minutes in media alone (red) or with wortmannin (blue). Cells were then fixed, permeabilized, and stained with 141Pr-anti-pSHP2 (pY580) (D66F10).

## Description

SHP-2, also known as PTPN11, is a widely expressed non-receptor protein tyrosine phosphatase and adapter protein. SHP-2 participates in diverse signaling cascades, including JAK-STAT, and PI3K/Akt pathways, and most prominently the Ras/MAPK pathway. SHP-2 is activated by phosphorylation at Tyr542 and Tyr580 downstream of growth factor binding, such as FGF and PDGF. Unlike most phosphatases, activated SHP-2 promotes, rather than inhibits, downstream intracellular signaling. The exact mechanism of this functionality remains unclear. Mutations in SHP-2 are associated with excessive Ras/MAPK pathway activation in several hematopoietic malignancies, including Noonan syndrome and juvenile myelomonocytic leukemia.

## 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.

### For technical support visit [fluidigm.com/support](http://fluidigm.com/support)

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