

Product Data Sheet: Purified anti-phospho-Shp2 (Tyr580) rabbit mAb

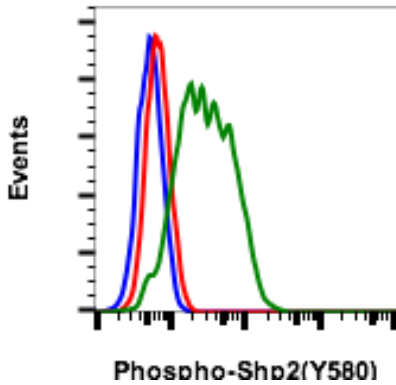
Catalog Number:	2101
Clone:	Shp2Y580-4A2
Isotype:	Rabbit IgG1κ
Immunogen:	A synthetic phospho-peptide corresponding to residues surrounding Tyr580 of human phospho Shp2
Reactivity:	Mouse, Human
Cross Reactivity:	Predicted to work with mouse, rat and other homologues.
Preparation:	Protein A+G
Formulation:	1X PBS, 0.02% NaN ₃ , 50% Glycerol, 0.1% BSA
Applications:	Flow Cytometry
Recommended Usage:	1.0 - 0.1 µg/ml. Optimum concentration should be determined by the user.
Product Configuration:	200 ul (0.5mg/ml)
Detection:	Anti-Rabbit IgG

Description

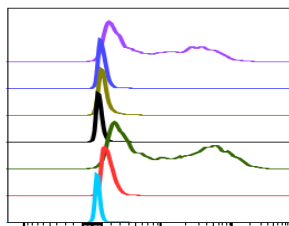
Src homology region 2 (SH2)-containing protein tyrosine phosphatase 2 (Shp2, phospho Shp2), encoded by PTPN11 gene, is a non-receptor phosphotyrosine phosphatase which is ubiquitously expressed in mammalian cells and contain one protein tyrosine phosphatase (PTP) catalytic domain and two SH2 domains. The phosphatase active site is located in the C-terminal of Shp2. Shp2 is phosphorylated by several stimulants and cytokines at Tyr580 inducing Shp2 activation. Activated Shp2 recruits Grb2 and Tyr580 phosphorylation of phospho Shp2 functions as the main binding site of Grb2, thereby activating downstream Ras in response to growth factors. In turn Grb2 controls FGFR2 phosphorylation by inhibiting receptor kinase and Shp2 phosphatase activity. Shp2 also promotes both ERK1/2 and PI3K/AKT signaling. High levels of Shp2 has been found in several cancer types including breast cancer and melanoma.

References

1. Bennett AM et al., (1994) Proc Natl Acad Sci USA. 91:7335–9.
2. Feng GS et al., (1994) Trends Genet. 10:54–8.
3. Mohi MG et al., (2007) Curr Opin Genet Dev. 17:23–30.
4. Vogel W et al., (1996) Cell Growth Differ. 7:1589–97
5. Ahmed Z et al., (2013) J Cell Biol. 200:493–504.
6. Hu ZQ et al., (2014) Oncol Rep 32:205-212.

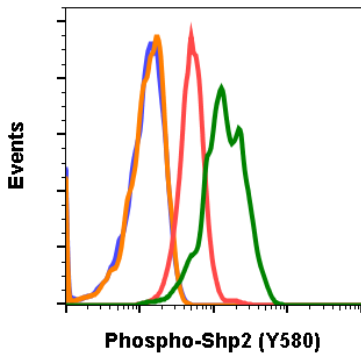
Purified anti-phospho-Shp2 (Tyr580) rabbit mAb Images


Flow cytometric analysis of U937 cells, secondary antibody only negative control (blue), or untreated (red) or treated with IFN α , IL4 and pervanadate (green) using Phospho-Shp2 (Tyr580) antibody at 0.05 ug/mL, Shp2Y580-4A2. Cat. #2101



Peptide blocking flow cytometric analysis of THP1 cells, secondary antibody only negative control (light blue) or untreated (red) or treated with IFN α + IL-4 + pervanadate (green) or untreated and blocked with phospho-peptide (black) or treated and blocked with phospho peptide (gold) or untreated and blocked with non-phospho peptide (dark blue) or treated and blocked with non-phospho peptide (purple) using Phospho-Shp2 (Tyr580) antibody Shp2Y580-4A2 at 0.1 μ g/mL. Cat. #2101.

SampleID	Median : BL1-A
IFN 4A2 N	5690
Ctr1 4A2 N	964
IFN 4A2 P	1064
Ctr1 4A2 P	682
IFN 4A2	9046
Ctr1 4A2	1545
Ctr1 2' only	522



Flow cytometric analysis of NIH3T3 cells, secondary antibody only negative control (blue) or 0.1 μ g/mL of isotype control Cat. #2141 (orange), or untreated (red) or treated with IFN α , IL-4 and pervanadate (green) using Phospho-Shp2 (Tyr580) antibody Shp2Y580-4A2 at 0.1 μ g/mL. Cat #2101.