Rabbit polyclonal antibody to SHP 2(phospho Y580)

Catalog Number: NSB558

Background: SHP2 (SH2-domain containing tyrosine phosphatase 2, also known as SHPTP2) is a ~70 kDa tyrosine phosphatase that plays an important role in cell growth and transformation and in mediating integrin, Src and receptor tyrosine kinase (RTK) signaling. SHP2 undergoes tyrosine phosphorylation on several sites including tyrosines 542 and 580 upon binding to platelet-derived growth factor receptor beta (PDGFRb), in response to PDGF stimulation. Serines 576 and 591 are phosphorylated by protein kinase C isoforms alpha, beta 1, beta 2, and eta, and in response to phorbol ester.

Alternate Names: anti-BPTP3 antibody, anti-CFC antibody, anti-Noonan syndrome 1 protein tyrosine phosphatase 2C antibody, anti-NS1 antibody, anti-Protein Tyrosine Phosphatase Non receptor Type 11 antibody, anti-PTP1D antibody, anti-PTP2C antibody, anti-PTPN11 antibody, anti-SAP2 antibody, anti-SHP2 domain containing protein tyrosine phosphatase 2 antibody, anti-SHPTP2 antibody, anti-SHPTP3 antibody, anti-SIT protein precursor antibody

Host: Rabbit

Research Areas: Cell Biology, Signal Transduction, Tyrosine, Phospho-Specific

Immunogen: The antiserum was produced against a chemically synthesized phosphopeptide derived from the region of human SHP2 that contains tyrosine 580. The sequence is conserved in mouse, rat and chicken.

Isotype: IgG

Phosphorylated: ppTyr580

Species Reactivity: Mouse SHP2. Human and rat SHP2 (100% homologous) have not been tested, but are expected to react.

Uses: This antibody is suitable for use in Western blotting. The recommended concentration for use in Western blotting is 1:1,000.

*The optimal concentration should be determined for each specific application.

* Other applications have not been tested.

Dilutions: Suggested working dilutions *

Western Blot

* Investigator should determine optimal working dilutions.

Positive Controls: NIH3T3 cells treated with PDGF.

Packaging: 0.1 ml of epitope affinity purified rabbit antisera in PBS(without Mg2+ and Ca2+), pH 7.3 (+/- 0.1), 50% glycerol, with 1.0 mg/mL BSA (IgG, protease free) as a carrier. Contains 0.05% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)

Storage: Store at -20 degrees Celcius. We recommend a brief centrifugation before opening to settle vial contents. Then, apportion into working aliquots and store at -20 degrees Celcius. For shipment or short-term storage (up to one week), 2-8 degrees Celcius is s
Limitations: This product is for research use only and is not approved for use in humans or in clinical diagnosis. This product is guaranteed for 6 months from date of receipt.

General References:


Peptide Competition

Lysates prepared from NIH3T3 cells left untreated (1) or treated with PDGF (2-5), were resolved by SDS-PAGE on a
10% polyacrylamide gel and transferred to PVDF. Membranes were blocked with a 3% BSA-TBST buffer for one hour at
room temperature, and incubated with SHP2 [pY580] antibody for two hours at room temperature in a 3% BSA-TBST
buffer, following prior incubation with: no peptide (1, 2), the non-phosphopeptide corresponding to the immunogen (3), a
generic phosphotyrosine-containing peptide (4), or, the phosphopeptide immunogen (5). After washing, membranes
were incubated with goat F(ab')2 anti-rabbit IgG HRP conjugate and bands were detected using the Pierce
SuperSignal(TM) method.

The data show that only the peptide corresponding to SHP2 [pY580] blocks the signal, verifying the specificity of the
antibody. This antibody was found not to cross-react with SHP2 phosphorylated on tyrosines 304, 327 or 542 (data not
shown).