Technical Data Sheet

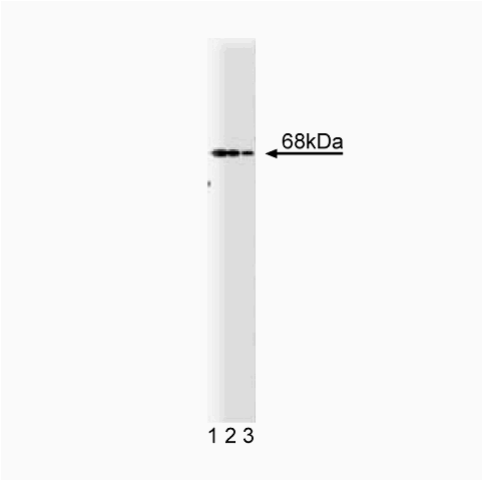
Purified Mouse Anti-PTP1C/SHP1

Product Information

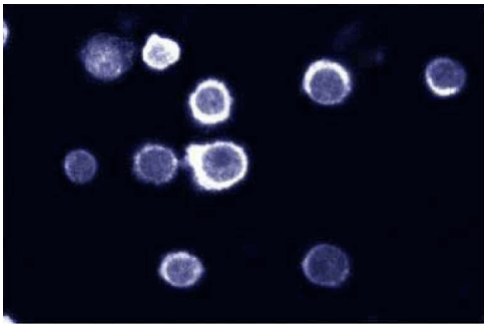
Material Number:	**610125**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	52/PTP1C/SHP1
Immunogen:	Human PTP1C aa.. 492-597
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Dog, Rat, Mouse
Target MW:	68 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

PTP1C (SH-PTP1, SHP-1, or HCP) is a protein-tyrosine phosphatase (PTP) that is expressed in epithelial and hematopoietic cells. It contains two N-terminal SH2 domains and a C-terminal phosphatase domain. While its distribution is primarily cytosolic, exposure to various stimuli induces movement of PTP1C to other cellular locations to allow interaction with its substrates. This enzyme associates with the IL-3, IL-4, erythropoietin, and stem cell factor receptors and may regulate their signaling pathways by dephosphorylation of their receptors or their downstream effectors. *Motheaten* mice, which possess a nonfunctional PTP1C gene, display multiple hematopoietic abnormalities including increased proliferation and activation of myeloid cells. Studies involving these mice have clearly implicated PTP1C in negative regulation of CSF-1 (colony stimulating factor-1) mitogenic signaling and have demonstrated a role for PTP1C as an intermediate between Ras and the MAP kinase pathway.



Western blot analysis of PTP1C on Jurkat cell lysate. *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of anti-PTP1C.*



Immunofluorescent staining on HL60 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

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Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Tested During Development
Immunofluorescence	Tested During Development
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Duchene J, Schanstra JP, Pecher C. A novel protein-protein interaction between a G protein-coupled receptor and the phosphatase SHP-2 is involved in bradykinin-induced inhibition of cell proliferation. *J Biol Chem.* 2002; 277(43):40375-40383.(Clone-specific: Immunoprecipitation, Western blot)

Keilhack H, Muller M, Bohmer SA, et al. Negative regulation of Ros receptor tyrosine kinase signaling. An epithelial function of the SH2 domain protein tyrosine phosphatase SHP-1. *J Cell Biol.* 2001; 152(2):325-334.(Clone-specific: Immunohistochemistry, Western blot)

Kenner KA, Anyanwu E, Olefsky JM, Kusari J. Protein-tyrosine phosphatase 1B is a negative regulator of insulin- and insulin-like growth factor-I-stimulated signaling. *J Biol Chem.* 1996; 271(33):19810-19816.(Biology)

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Lund-Johansen F, Davis K, Bishop J, de Waal Malefyt R. Flow cytometric analysis of immunoprecipitates: high-throughput analysis of protein phosphorylation and protein-protein interactions. *Cytometry.* 2000; 39(4):250-259.(Clone-specific: Flow cytometry, Immunoprecipitation, Western blot)