Shp-1 (human), (recombinant)

Shp-1 is one of two human “Src Homology-2 (SH2) containing phosphatases”, enzymes in which two regulatory phosphotyrosine binding domains (N-SH2 & C-SH2) lie N-terminal to the catalytic (PTP) domain. Recruitment of Shp-1 (Src Homology-2 (SH2) containing phosphatase-1) to cell-surface receptors is mediated by SH2-domain binding to “Immuno-receptor Tyrosine-based Inhibitory Motifs” (consensus ITIM: [I/V/L]-x-pY-x-x-[I/V/L]; death receptor variant: A-x-pY-x-x-L). This binding activates Shp-1 phosphatase by displacing an inhibitory interaction between the N-SH2 and PTP domains. By dephosphorylating the downstream elements of various signal transduction pathways, Shp-1 acts as a negative regulator. Shp-1 is highly expressed in hematopoietic cells and to a lesser extent in epithelial cells. It plays a significant role in various stages of hematopoietic development and in limiting neutrophil activation and inflammatory tissue damage through down-regulation of anti-apoptotic, cytokine-derived signals. In most lymphomas and leukemias Shp-1 expression is decreased or absent and Shp-1 may play a role in the pathogenesis of these and other cancers.

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Ordering Information

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BML-SE334-0020	20µg

Manuals, SDS & CofA

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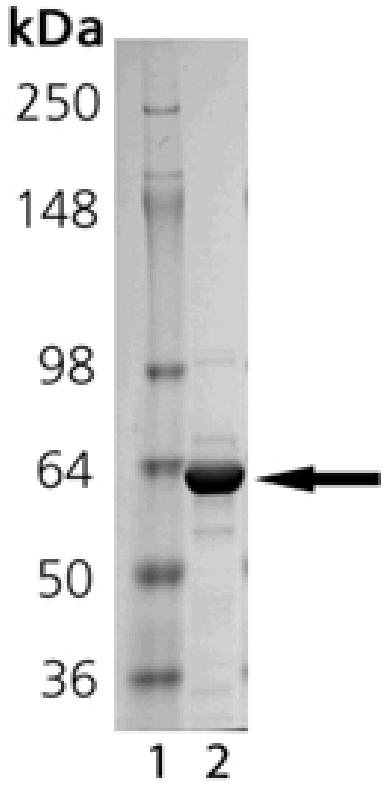

SDS-PAGE analysis: Lane 1: MW Marker; Lane 2: 2.0µg of purified Shp-1 (human) (recombinant).

Handling & Storage

Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Src homology-2 containing protein tyrosine phosphatase 1
Formulation	Liquid. In 50mM TRIS/HCl, pH 8.0, containing 150mM NaCl, 5mM DTT, 0.03% Brij 35, 0.1mM EDTA and 10% glycerol.
MW	67.5 kDa
Purity	≥90% (SDS-PAGE)
Purity Detail	Purified by multi-step chromatography.
Source	Produced in *E. coli*. Full length human Shp-1 (aa 1-595).
Specific Activity	≥2000 pmol/min/µg assayed by p-nitrophenylphosphate (pNPP, 50 mM) hydrolysis at pH 7.0, 30°C
UniProt ID	P29350

ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com