

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat SHP-1. The antibody does not detect SHP-2 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human SHP-1 Ala205-Lys595 Accession # P29350
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Src-Homology 2 domain Phosphatase-1 (SHP-1), also known as Protein Tyrosine Phosphatase 1C (PTP1C), PTPN6, and Hematopoietic Cell Phosphatase (HCPH), is an enzyme that selectively dephosphorylates tyrosine residues in proteins. Spontaneous point mutations in the SHP-1 gene in mice produce the "motheaten" and "motheaten viable" phenotypes that are severely autoimmune and immunodeficient (1). The enzyme is highly expressed in leukocyte cell types (2). SHP-1 has a regulatory region containing two Src homology 2 (SH2) domains that are critical for its binding to ITIM domains in inhibitory immunoreceptors (3). Deletion of the SH2 domains, as in this product, causes a marked increase in phosphatase activity (4). SHP-1 will dephosphorylate a wide variety of proteins, including the EGF receptor (5). A phosphopeptide containing the EGFR (Y992) sequence (R&D Systems, Catalog # ES006) can be used to measure the activity of SHP-1 by detecting the release of phosphate (R&D Systems, Catalog # DY996).

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