# SHP-2 Protein, Mouse (HEK293, His)

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| **Cat. No.:** | HY-P74549 |
| **Synonyms:** | Tyrosine-protein phosphatase non-receptor type 11; SH-PTP2; SHP-2; Ptpn11 |
| **Species:** | Mouse |
| **Source:** | HEK293 |
| **Accession:** | P35235-2 (M1-R593) |
| **Gene ID:** | 19247 |
| **Molecular Weight:** | Approximately 65 kDa |

## PROPERTIES

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| **AA Sequence** | MTSRRWFHPN ITGVEAENLL LTRGVDGSFL ARPSKSNPGD<br>FTLSVRRNGA VTHIKIQNTG DYYDLYGGEK FATLAELVQY<br>YMEHHGQLKE KNGDVIELKY PLNCADPTSE RWFHGHLSGK<br>EAEKLLTEKG KHGSFLVRES QSHPGDFVLS VRTGDDKGES<br>NDGKSKVTHV MIRCQELKYD VGGGERFDSL TDLVEHYKKN<br>PMVETLGTVL QLKQPLNTTR INAAEIESRV RELSKLAETT<br>DKVKQGFWEE FETLQQQECK LLYSRKEGQR QENKNKNRYK<br>NILPFDHTRV VLHDGDPNEP VSDYINANII MPEFETKCNN<br>SKPKKSYIAT QGCLQNTVND FWRMVFQENS RVIVMTTKEV<br>ERGKSKCVKY WPDEYALKEY GVMRVRNVKE SAAHDYTLRE<br>LKLSKVGQGN TERTVWQYHF RTWPDHGVPS DPGGVLDFLE<br>EVHHKQESIV DAGPVVVHCS AGIGRTGTFI VIDILIDIIR<br>EKGVDCDIDV PKTIQMVRSQ RSGMVQTEAQ YRFIYMAVQH<br>YIETLQRRIE EEQKSKRKGH EYTNIKYSLV DQTSGDQSPL<br>PPCTPTPPCA EMREDSARVY ENVGLMQQQR SFR |
| **Biological Activity** | Measured by its ability to dephosphorylate a tyrosine residue in a peptide containing the EGFR Y992 phosphorylation site. The specific activity is 34.1661 μmol/min/mg, measured under the described conditions. |
| **Appearance** | Lyophilized powder |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose). |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |

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| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | SHP-2 protein functions downstream of various receptor and cytoplasmic protein tyrosine kinases, participating in signal transduction from the cell surface to the nucleus. It positively regulates the MAPK signal transduction pathway and exhibits dephosphorylation activity towards substrates such as GAB1, ARHGAP35, EGFR, ROCK2 (at 'Tyr-722,' enhancing its RhoA binding activity), CDC73, and tyrosine-phosphorylated NEDD9/CAS-L. Notably, SHP-2 plays a role in the inactivation of SOX9 by dephosphorylating its tyrosine residues, leading to the promotion of ossification. Through its multifaceted dephosphorylation activities, SHP-2 is a critical player in modulating key signaling pathways involved in cell growth, differentiation, and cellular responses to various stimuli. |

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA