

SHP-2 Protein, Human (T253M, Q257L, His)

Cat. No.:	HY-P700618
Synonyms:	protein tyrosine phosphatase, non-receptor type 11; Noonan syndrome 1 , NS1; tyrosine-protein phosphatase non-receptor type 11; BPTP3; PTP2C; SH PTP2; SHP 2; SHP2; PTP-2C; protein tyrosine phosphatase-2; protein-tyrosine phosphatase 1D; protein-tyrosine phosphatase 2C; CFC; NS1; PTP-1D; SH-PTP2; SH-PTP3; MGC14433;
Species:	Human
Source:	E. coli
Accession:	Q06124 (T2-R593, T253M, Q257L)
Gene ID:	5781
Molecular Weight:	70-75 kDa

PROPERTIES

AA Sequence

T S R R W F H P N I	T G V E A E N L L L	T R G V D G S F L A	R P S K S N P G D F
T L S V R R N G A V	T H I K I Q N T G D	Y Y D L Y G G E K F	A T L A E L V Q Y Y
M E H H G Q L K E K	N G D V I E L K Y P	L N C A D P T S E R	W F H G H L S G K E
A E K L L T E K G K	H G S F L V R E S Q	S H P G D F V L S V	R T G D D K G E S N
D G K S K V T H V M	I R C Q E L K Y D V	G G G E R F D S L T	D L V E H Y K K N P
M V E T L G T V L Q	L K Q P L N T T R I	N A A E I E S R V R	E L S K L A E T T D
K V K Q G F W E E F	E M L Q Q L E C K L	L Y S R K E G Q R Q	E N K N K N R Y K N
I L P F D H T R V V	L H D G D P N E P V	S D Y I N A N I I M	P E F E T K C N N S
K P K K S Y I A T Q	G C L Q N T V N D F	W R M V F Q E N S R	V I V M T T K E V E
R G K S K C V K Y W	P D E Y A L K E Y G	V M R V R N V K E S	A A H D Y T L R E L
K L S K V G Q G N T	E R T V W Q Y H F R	T W P D H G V P S D	P G G V L D F L E E
V H H K Q E S I M D	A G P V V V H C S A	G I G R T G T F I V	I D I L I D I I R E
K G V D C D I D V P	K T I Q M V R S Q R	S G M V Q T E A Q Y	R F I Y M A V Q H Y
I E T L Q R R I E E	E Q K S K R K G H E	Y T N I K Y S L A D	Q T S G D Q S P L P
P C T P T P P C A E	M R E D S A R V Y E	N V G L M Q Q Q K S	F R

Appearance

Lyophilized powder

Formulation

Lyophilized from a 0.2 µm filtered solution of 40 mM Tris, 110 mM NaCl, 2.2 mM KCl, 0.04% Tween-20, 6% Trehalose, pH 8.0 or PBS, 6% Trehalose, pH 7.4.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O.

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.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

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 plays a crucial role in dephosphorylating key substrates, including GAB1, ARHGAP35, EGFR, ROCK2 (at 'Tyr-722'), and CDC73. Additionally, SHP-2 dephosphorylates SOX9 on tyrosine residues, leading to the inactivation of SOX9 and the promotion of ossification. Furthermore, it targets tyrosine-phosphorylated NEDD9/CAS-L for dephosphorylation, highlighting its diverse roles in modulating cellular signaling cascades.

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

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