

Recombinant Human SEPHS2 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. SEPHS2-2161H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	SEPHS2 MS Standard C13 and N15-labeled recombinant protein (NP_036380) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	This gene encodes an enzyme that catalyzes the production of monoselenophosphate (MSP) from selenide and ATP. MSP is the selenium donor required for synthesis of selenocysteine (Sec), which is co-translationally incorporated into selenoproteins at in-frame UGA codons that normally signal translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, the Sec insertion sequence (SECIS) element, which is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. This protein is itself a selenoprotein containing a Sec residue at its active site, suggesting the existence of an autoregulatory mechanism. It is preferentially expressed in tissues implicated in the synthesis of selenoproteins and in sites of blood cell development. A pseudogene for this locus has been identified on chromosome 5.
Molecular Mass	47.1 kDa
AA Sequence	MAEASATGACGEAMAAAEGSSGPAGLTGGRSFSNYRPFEPQALGLSPSWRLTGFS GMKG*GCKVPQEALLKLLAGLTRPDVRPPLGRGLVGGQEEASQEAGLPAGAGPSP

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TFPALGIGMDSCVIPLRHGGLSLVQTDDFFYPLVEDPYMMGRIACANVLSLDLYAMGIT
 ECDNMLMLLSVSQSMSEEEREKVTPLMVKGFRDAAEEGGTAVTGGQTVVNPWIIIG
 GVATVVCQPNEFIMPDSAVVGDVLVLTKPLGTQVAVNAHQWLDNPERWNVKVMV
 SREEVELAYQEAMFNMATLNRATAAGLMHTFNAHAATDITGFGILGHSQNLAKQQRN
 EVSFVIHNLPIIAKMAAVSKASGRFGLLQGTSAETSGGLLICLPREQAARFCSEIKSSK
 YGEGHQAQWIVGIVEKGNRTARIIDKPRVIEVLPRGATAAVLAPDSSNASSEPSSTRTR
 PLEQKLISEEDLAANDILDYKDDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name [SEPHS2 selenophosphate synthetase 2 \[Homo sapiens \(human\) \]](#)

Official Symbol [SEPHS2](#)

Synonyms SEPHS2; selenophosphate synthetase 2; selenide, water dikinase 2; SPS2; selenium donor protein 2; selenophosphate synthase 2;

Gene ID [22928](#)

mRNA Refseq [NM_012248](#)

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Protein Refseq	NP_036380
MIM	606218
UniProt ID	Q99611

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