

Selenoprotein P (SEPP1) Recombinant Protein | SEPP1 recombinant protein

Recombinant Human Selenoprotein P (SEPP1) (U59S, U300S, U318S, U330S, U345S, U352S, U367S, U369S, U376S, U378S)

CATALOG #
AAA18590

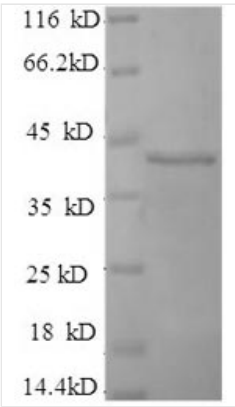
HOST
E Coli or Yeast or Baculovirus or Mammalian Cell

PRODUCT SYNONYMS

Selenoprotein P (SEPP1); Recombinant Human Selenoprotein P (SEPP1) (U59S; U300S; U318S; U330S; U345S; U352S; U367S; U369S; U376S; U378S); SEPP1 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	20-381aa (U59S, U300S, U318S, U330S, U345S, U352S, U367S, U369S, U376S, U378S); Full Length of Mature Protein
Sequence	ESQDQSSLCK QPPAWSIRDQ DPMLNSNGSV TVVALLQASS YLCILQASKL EDLRVKLKKE GYSNISYIVV NHQGISSRLK YTHLKNKVSE HIPVYQQEEN QTDVWTLNG SKDDFLIYDR CGRLVYHLGL PFSFLTFPYV EEAIKIAYCE KKCGNCSLTT LKDEDFCKRV SLATVDKTVE TPSPHYHHEH HHNHGHQHLG SSELSENQQP GAPNAPTHPA PPGLHHHHKH KGQHRQGHPE NRDMPASEDL QDLQKKLCRK RCINQLLCKL PTDSELAPRS SCCHCRHLIF EKTGSAITSQ CKENLPSLCS SQGLRAEENI TESCQSR LPP AASQISQQLI PTEASASSRS KNQAKKSESP SN
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.



SDS-PAGE

10	20	30	40	50
MWRSGLALA	LCLLPSGGTE	SQDQSSLCKQ	PPAWSIRDQD	PMLNSNGSVT
60	70	80	90	100
VVALLQASUY	LCILQASKLE	DLRVKLKKEG	YSNISYIVVN	HQGISSRLKY
110	120	130	140	150
THLKNKVSEH	IPVYQQEENQ	TDVWILLNGS	KDDFLIYDRC	GRLVYHLGLP
160	170	180	190	200
FSFLTFPYVE	EAIKIAYCEK	KOGNCSLTIL	KDEDFCKRVS	LATVDKTIVET
210	220	230	240	250
PSPHYHHEHH	HNHGHQHLGS	SELSENQQPG	APNAPTHPAP	PGLHHHHKHK
260	270	280	290	300
GQHRQGHFEN	RDMPASEDLQ	DLQKKLCRRK	CINQLLCKLP	TDSELAPRSU
310	320	330	340	350
CCHCRHLIFE	KTGSAITUQC	KENLPSLCSU	QGLRAEENIT	ESQQUURLPPA
360	370	380		
AIQISQQLIP	TEASASURUK	NQAKKTEUPS	N	

Sequence Information

There are 10 selenocysteine (U) in the original sequence. The amino acids at multiple sites are 'U' in UniProt (yellow highlighted; U59S, U300S, U318S, U330S, U345S, U352S, U367S, U369S, U376S, U378S), reference:: <https://www.uniprot.org/uniprot/P49908>). The 'U' at each yellow highlighted site has been mutated to 'S' to manufacture the AAA18590 Recombinant Human Selenoprotein P. 'U' selenocysteine is encoded by UGA and it is normally used as a stop codon in prokaryotic cells, which will lead to early termination of translation, hence the lab mutates this selenocysteine for protein manufacturing. In terms of the formation of selenocysteine, selenocysteine is actually a derivative of serine. Selenocysteine and cysteine as well as serine are all highly similar. This selenocysteine can be regarded as either the 'S' of cysteine replaced by Se, or the 'O' of serine replaced by Se. The selenocysteine can mutated to be either serine or cysteine. Generally, the lab mutates 'U' to serine for protein expression because mutating the 'U' to cysteine may result in the formation of additional disulfide bonds, potentially affecting the expression and structure of the protein.

ADDITIONAL INFORMATION

Related Product Information for SEPP1 recombinant protein	Might be responsible for some of the extracellular antioxidant defense properties of selenium or might be involved in the transport of selenium. May supply selenium to tissues such as brain and testis.
References	Conserved nucleotide sequences in the open reading frame and 3' untranslated region of selenoprotein P mRNA.Hill K.E., Lloyd R.S., Burk R.F.Proc. Natl. Acad. Sci. U.S.A. 90:537-541(1993) Hill K.E.NIEHS SNPs programThe DNA sequence and comparative analysis of human chromosome 5.Schmutz J., Martin J., Terry A., Couronne O., Grimwood J., Lowry S., Gordon L.A., Scott D., Xie G., Huang W., Hellsten U., Tran-Gyamfi M., She X., Prabhakar S., Aerts A., Altherr M., Bajorek E., Black S., Branscomb E., Caoile C., Challacombe J.F., Chan Y.M., Denys M., Detter J.C., Escobar J., Flowers D., Fotopulos D., Glavina T., Gomez M., Gonzales E., Goodstein D., Grigoriev I., Groza M., Hammon N., Hawkins T., Haydu L., Israni S., Jett J., Kadner K., Kimball H., Kobayashi A., Lopez F., Lou Y., Martinez D., Medina C., Morgan J., Nandkeshwar R., Noonan J.P., Pitluck S., Pollard M., Predki P., Priest J., Ramirez L., Retterer J., Rodriguez A., Rogers S., Salamov A., Salazar A., Thayer N., Tice H., Tsai M., Ustaszewska A., Vo N., Wheeler J., Wu K., Yang J., Dickson M., Cheng J.-F., Eichler E.E., Olsen A., Pennacchio L.A., Rokhsar D.S., Richardson P., Lucas S.M., Myers R.M., Rubin E.M.Nature 431:268-274(2004) Purification of selenoprotein P from human plasma.Aakesson B., Bellew T., Burk R.F.Biochim. Biophys. Acta 1204:243-249(1994) A novel method for the purification of selenoprotein P from human plasma.Mostert V., Lombeck I., Abel J.Arch. Biochem. Biophys. 357:326-330(1998) Selenoprotein P properties, functions, and regulation.Mostert V.Arch. Biochem. Biophys. 376:433-438(2000) Selenoprotein P. A selenium-rich extracellular glycoprotein.Burk R.F., Hill K.E.J. Nutr. 124:1891-1897(1994) Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry.Liu T., Qian W.-J., Gritsenko M.A., Camp D.G. II, Monroe M.E., Moore R.J., Smith R.D.J. Proteome Res. 4:2070-2080(2005) Glycoproteomics analysis of human liver tissue by combination of multiple enzyme digestion and hydrazide chemistry.Chen R., Jiang X., Sun D., Han G., Wang F., Ye M., Wang L., Zou H.J. Proteome Res. 8:651-661(2009) A strategy for precise and large scale identification of core fucosylated glycoproteins.Jia W., Lu Z., Fu Y., Wang H.P., Wang L.H., Chi H., Yuan Z.F., Zheng Z.B., Song L.N., Han H.H., Liang Y.M., Wang J.L., Cai Y., Zhang Y.K., Deng Y.L., Ying W.T., He S.M., Qian X.H.Mol. Cell. Proteomics 8:913-923(2009) An enzyme assisted RP-RPLC approach for in-depth analysis of human liver phosphoproteome.Bian Y., Song C., Cheng K., Dong M., Wang F., Huang J., Sun D., Wang L., Ye M., Zou H.J. Proteomics 96:253-262(2014)

NCBI AND UNIPROT INFORMATION

NCBI GI #	148277018
NCBI GeneID	6414
NCBI Accession #	NP_001078955.1
NCBI GenBank Nucleotide #	NM_001085486.1
UniProt Accession #	P49908; Q6PD59; Q6PI43; Q6PI87; Q6PJF9
Molecular Weight	42.6 kDa
NCBI Official Full Name	selenoprotein P isoform 1
NCBI Official Synonym Full Names	selenoprotein P, plasma, 1
NCBI Official Symbol	SEPP1
NCBI Official Synonym Symbols	SeP; SELP; SEPP
NCBI Protein Information	selenoprotein P
UniProt Protein Name	Selenoprotein P
UniProt Gene Name	SEPP1
UniProt Synonym Gene Names	SELP; SeP
UniProt Entry Name	SEPP1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/sepp1-recombinant-protein-e-coli/18590>