Osmolarity Sensor Protein Envz (envZ) Escherichia Coli Recombinant Protein

PRODUCT OVERVIEW

Product Name	Osmolarity sensor protein EnvZ (envZ), Recombinant Protein
Full Product Name	Recombinant Escherichia coli Osmolarity sensor protein EnvZ (envZ)
Product Gene Name	envZ recombinant protein
Product Synonym Gene Name	envZ; ompB, perA, tpo
Product Synonym Names	Recombinant Osmolarity sensor protein EnvZ (envZ); Osmolarity sensor protein EnvZ EC= 2.7.13.3
Sequence	MRRLRFSPRS SFARTLLLIV TLLFASLVTT YLVVLNFAIL PSLQQFNKVL AYEVRMLMTD KLQLEDGTQL VVPPAFRREI YRELGISLYS NEAAEEAGLR WAQHYEFLSH QMAQQLGGPT EVRVEVNKSS PVVWLKTWLS PNIWVRVPLT EIHQGDFSPL FRYTLAIMLL AIGGAWLFIR IQNRPLVDLE HAALQVGKGI IPPPLREYGA SEVRSVTRAF NHMAAGVKQL ADDRTLLMAG VSHDLRTPLT RIRLATEMMS EQDGYLAESI NKDIEECNAI IEQFIDYLRT GQEMPMEMAD LNAVLGEVIA AESGYEREIE TALYPGSIEV KMHPLSIKRA VANMVVNAAR YGNGWIKVSS GTEPNRAWFQ VEDDGPGIAP EQRKHLFQPF VRGDSARTIS GTGLGLAIVQ RIVDNHNGML ELGTSERGGL SIRAWLPVPV TRAQGTTKEG
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degree C. For extended storage, store at -20 or -80 degree C.
Molecular Weight	50,334 Da
Sequence Positions	1-450
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
Chromosome Location	NC_000913.2 (3532538..3533890, complement)
3D Structure	ModBase 3D Structure for P0AEJ4
Species	Escherichia coli (strain K12)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for envZ recombinant protein	MBS1167778 is a recombinant protein targeting envZ. Also known as Recombinant Escherichia coli Osmolarity sensor protein EnvZ (envZ). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of envZ recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for envZ. It may not necessarily be applicable to this product.

NCBI GI #	16131281
NCBI GeneID	947272

NCBI Accession #	NP_417863.1
UniProt Primary Accession #	P0AEJ4
UniProt Secondary Accession #	P02933; Q2M769
GenBank Nucleotide #	NC_000913.2
NCBI Official Full Name	sensory histidine kinase in two-component regulatory system with OmpR
NCBI Official Symbol	envZ
NCBI Official Synonym Symbols	cpr; ECK3391; JW3367; ompB; perA; tpo
UniProt Protein Name	Osmolarity sensor protein EnvZ
Protein Family	Osmolarity sensor protein
UniProt Gene Name	envZ
UniProt Synonym Gene Names	ompB; perA; tpo
UniProt Entry Name	ENVZ_ECOLI
NCBI Protein Information	sensory histidine kinase in two-component regulatory system with OmpR
NCBI Summary for envZ	The cogate response regulator for EnvZ is OmpR. [More information is available at EcoGene: EG10269]. The EnvZ protein can exist in two alternative conformational states, a high osmolarity form and a low osmolarity form. [More information is available at EcoCyc: EG10269].
UniProt Comments for envZ	Function: Member of the two-component regulatory system EnvZ/OmpR involved in the regulation of osmoregulation (genes ompF and ompC). EnvZ functions as a membrane-associated protein kinase that phosphorylates OmpR in response to environmental signals. Catalytic activity: ATP + protein L-histidine = ADP + protein N-phospho-L-histidine. Enzyme regulation: Activity is modulated by MzrA. Ref.12 Ref.13 Subunit structure: Homodimer. Interacts with MzrA. Ref.10 Ref.12 Ref.13 Ref.15 Subcellular location: Cell inner membrane; Multi-pass membrane protein. Domain: The HAMP domain by itself is intrinsically disordered. Ref.11 Post-translational modification: Autophosphorylated. Ref.5 Ref.14 Sequence similarities: Contains 1 HAMP domain.Contains 1 histidine kinase domain.
Research Articles on envZ	**1.** HDXMS data showed that the cytoplasmic domain of EnvZ exists as an ensemble of multiple conformations and osmolytes favoured increased helicity. High osmolality increased the autophosphorylation of His243.
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