

LUXS Protein, E.coli (His)

Cat. No.:	HY-P71528
Synonyms:	luxS; ygaG; b2687; JW2662; S-ribosylhomocysteine lyase; EC 4.4.1.21; AI-2 synthesis protein; Autoinducer-2 production protein LuxS
Species:	E.coli
Source:	E. coli
Accession:	P45578 (P2-I171)
Gene ID:	947168
Molecular Weight:	23-25 kDa

PROPERTIES

AA Sequence	<pre> P L L D S F T V D H T R M E A P A V R V A K T M N T P H G D A I T V F D L R F C V P N K E V M P E R G I H T L E H L F A G F M R N H L N G N G V E I I D I S P M G C R T G F Y M S L I G T P D E Q R V A D A W K A A M E D V L K V Q D Q N Q I P E L N V Y Q C G T Y Q M H S L Q E A Q D I A R S I L E R D V R I N S N E E L A L P K E K L Q E L H I </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in PBS, 6% Trehalose, pH 7.4 or PBS, 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 ddH ₂ O.
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	<p>The LUXS Protein plays a pivotal role in the synthesis of autoinducer 2 (AI-2), a signaling molecule secreted by bacteria that facilitates communication regarding both cell density and the metabolic potential of the environment. This process is integral to quorum sensing, the regulation of gene expression in response to changes in cell density. LUXS catalyzes the transformation of S-ribosylhomocysteine (RHC) into homocysteine (HC) and 4,5-dihydroxy-2,3-pentadione (DPD), elucidating its enzymatic involvement in the production of AI-2. The intricate functions of LUXS highlight its crucial role in bacterial communication and sensing mechanisms, contributing to the coordination of bacterial behavior in response to environmental cues.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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