

## TsaE Protein, E.coli

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| <b>Cat. No.:</b>         | HY-P71500  |
| <b>Synonyms:</b>         | tsaE; yjeE; b4168; JW4126tRNA threonylcarbamoyladenine biosynthesis protein TsaE; t(6)A37 threonylcarbamoyladenine biosynthesis protein TsaE |
| <b>Species:</b>          | E.coli   |
| <b>Source:</b>           | E. coli  |
| <b>Accession:</b>        | P0AF67 (1M-153G)   |
| <b>Gene ID:</b>          | 60902986   |
| <b>Molecular Weight:</b> | Approximately 16.9 kDa   |

### PROPERTIES

|                                |  |
|--------------------------------|--|
| <b>AA Sequence</b>             | <pre> M M N R V I P L P D   E Q A T L D L G E R   V A K A C D G A T V   I Y L Y G D L G A G K T T F S R G F L Q   A L G H Q G N V K S   P T Y T L V E P Y T   L D N L M V Y H F D L Y R L A D P E E L   E F M G I R D Y F A   N D A I C L V E W P   Q Q G T G V L P D P D V E I H I D Y Q A   Q G R E A R V S A V   S S A G E L L L A R   L A G           </pre> |
| <b>Appearance</b>              | Lyophilized powder.  |
| <b>Formulation</b>             | Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.  |
| <b>Endotoxin Level</b>         | <1 EU/μg, determined by LAL method.  |
| <b>Reconstitution</b>          | It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O.  |
| <b>Storage &amp; Stability</b> | 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.   |
| <b>Shipping</b>                | Room temperature in continental US; may vary elsewhere.  |

### DESCRIPTION

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| <b>Background</b> | <p>TsaE stands as a crucial factor in the intricate process of tRNA modification, specifically in the formation of a threonylcarbamoyl group on adenosine at position 37 (t(6)A37) in tRNAs that decode codons commencing with adenine. Its involvement is proposed in facilitating the transfer of the threonylcarbamoyl moiety from threonylcarbamoyl-AMP (TC-AMP) to the N6 group of A37, working collaboratively with TsaD and TsaB. While TsaE's exact role in the t(6)A biosynthesis pathway is still elucidated, it is suggested to exert indirect influence, potentially regulating the core enzymatic function of TsaD. Intriguingly, TsaE showcases ATPase activity in vitro, underscoring its dynamic engagement in molecular processes critical for tRNA modification.</p> |
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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