

## Active Recombinant E.coli SurA, His-tagged

**Cat. No.** SurA-2759E    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant E.coli SurA protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>          | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 21-428 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Description</b>      | SurA is a periplasmic peptidyl-prolyl isomerase (PPIase) and chaperone of Escherichia coli and other Gram-negative bacteria. This protein is a major factor in the biogenesis of beta-barrel outer membrane proteins (OMPs) and plays an integral role in cell envelope homeostasis and cell envelope functions. It is essential for the survival of E.coli in stationary phase and required for pilus biogenesis.                                                                                              |
| <b>Purity</b>           | > 95% by SDS – PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Sequences</b>        | <p>MGSSHHHHHH SSGLVPRGSH MAPQVVDKVA AVVNNGVVLE SDVDGLMQSV</p> <p>KLNAAQARQQ LPDDATLRHQ IMERLIMDQI ILQMGQKMGV KISDEQLDQA</p> <p>IANIAKQNNM TLDQMRSRLA YDGLNYNTYR NQIRKEMIIS EVRNNEVRRR</p> <p>ITILPQEVES LAQQVGNQND ASTELNLSHI LIPLPENPTS DQVNEAESQA</p> <p>RAIVDQARNG ADFGKLAIAH SADQQALNGG QMGWGRIQEL PGIFAQALST</p> <p>AKKGDIVGPI RSGVGFHILK VNDLRGESKN ISVTEVHARH ILLKPSPIMT</p> <p>DEQARVKLEQ IAADIKSGKT TFAAAAKEFS QDPGSANQGG DLGWATPDIF</p> <p>DPAFRDALTR LNKGQMSAPV HSSFGWHLIE LLDTRNVDKT DAAQKDRAYR</p> |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

MLMNRKFSEE AASWMQEQRA SAYVKILSN.

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Weight</b>    | 47.3 kDa(429aa), confirmed by MALDI-TOF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Form</b>                | Liquid. In 20 mM Tris-HCl Buffer (pH 8.0) containing 10% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Concentration</b>       | 1 mg/ml (determined by Bradford assay).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Biological activity</b> | Specific activity is > 450 nmoles/min/mg, and is defined as the amount of enzyme that cleaves 1umole of suc-AAFP-pNA per minute at 25oC in Tris-Hcl pH8.0 using chymotrypsin.                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Activity Assay</b>      | 1. Prepare 170ul assay buffer into a suitable container and pre-chill on ice before use: The final concentrations are 200 mM Tris-Hcl, pH 8.0, and 20nM chymotrypsin.2. Add 10ul of recombinant surA protein with 1ug in assay buffer.3. Mix by inversion and equilibrate to 1oC and monitor the A405nm until the value is constant using a spectrophotometer.4. Add 20ul pre-chilled 5mM suc-AAFP-pNA. (Substrate was dissolved in TFE that contained 460mM LiCl to a concentration of 3 mM)5. Record the increase in A405 nm for 30 minutes at 25oC. |
| <b>Storage</b>             | Can be stored at +4oC short term (1-2 weeks). For long term storage, aliquot and store at -20oC or -70oC. Avoid repeated freezing and thawing cycles.                                                                                                                                                                                                                                                                                                                                                                                                  |

## GENE INFORMATION

|                  |                                                                                          |
|------------------|------------------------------------------------------------------------------------------|
| <b>Gene Name</b> | surA peptidyl-prolyl cis-trans isomerase SurA [ Escherichia coli UMN026 ]                |
| <b>Gene ID</b>   | 7257404                                                                                  |
| <b>Synonyms</b>  | surA; peptidyl-prolyl cis-trans isomerase SurA; peptidyl-prolyl cis-trans isomerase SurA |

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Protein Refseq

YP\_002410833

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