

## Recombinant E. coli sucC Protein, His-tagged

**Cat. No.** sucC-187E    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Active E. coli (strain K12) C-terminal His-tagged Succinyl-CoA synthetase enzyme purified from E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>      | Succinyl-CoA synthetase from E. coli is responsible for the coupled hydrolysis of succinyl-CoA to the production of ATP (or GTP) in the substrate-level phosphorylation step of the citric acid cycle (TCA). This enzyme complex is formed as a heterotetramer, $\alpha_2\beta_2$ , where the two $\alpha$ subunits each contain the coenzyme A and phosphate binding sites, and the two $\beta$ subunits each contain the succinate binding sites and provide nucleotide binding specificity. This enzyme is $Mg^{2+}$ -dependent. |
| <b>Molecular Mass</b>   | 29.8 kDa ( $\alpha$ ), 41.4 kDa ( $\beta$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Purity</b>           | $\geq 85\%$ estimated by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Unit Definition</b>  | One unit is defined as the amount of enzyme required to produce 1 nmol NADH per minute at 25 centigrade in 34 mM Glycylglycine buffer, pH 8.4, 3.4 mM Magnesium Chloride, 1.2 mM ATP, 0.89 mM Coenzyme A, 5.8 mM Succinic acid, 4.1 U/mL pyruvate kinase, 3.4 U/mL Lactic Dehydrogenase.                                                                                                                                                                                                                                            |
| <b>Stability</b>        | $\geq 1$ year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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**Storage** At -80 centigrade (as supplied); avoid freeze/thaw cycles by storing protein in aliquots

**Storage Buffer** 50 mM HEPES, pH 8.0, 150 mM sodium chloride, 20% glycerol

## GENE INFORMATION

**Gene Name** [sucC succinyl-CoA synthetase subunit beta \[ Escherichia coli str. K-12 substr. MG1655 \]](#)

**Official Symbol** [sucC](#)

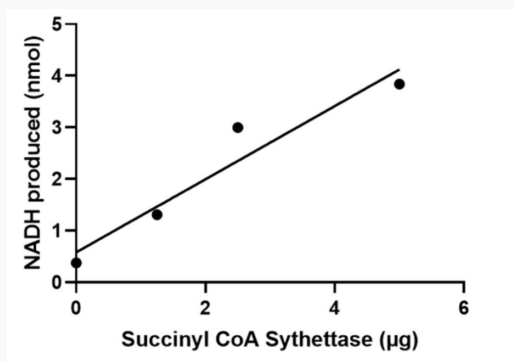
**Synonyms** [sucC](#); succinyl-CoA synthetase subunit beta; ECK0716; succinyl-CoA synthetase subunit beta; EC 6.2.1.5

**Gene ID** [945312](#)

**Protein Refseq** [NP\\_415256](#)

**UniProt ID** [P0A836](#)

**Succinyl CoA Synthetase Activity**

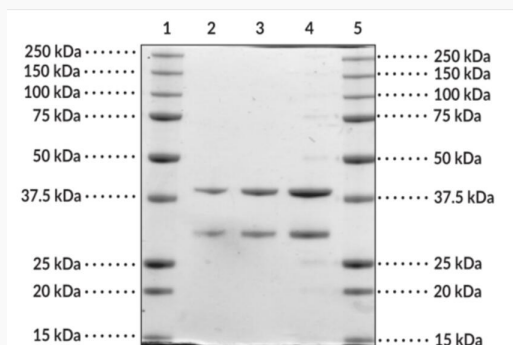


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**SDS-PAGE Analysis  
of Succinyl-CoA  
synthetase**



Lane 1: MW Markers

Lane 2: Succinyl-CoA synthetase (1 µg)

Lane 3: Succinyl-CoA synthetase (2 µg)

Lane 4: Succinyl-CoA synthetase (4 µg)

Lane 5: MW Markers