



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# PRODUCT INFORMATION



## Succinyl-CoA synthetase

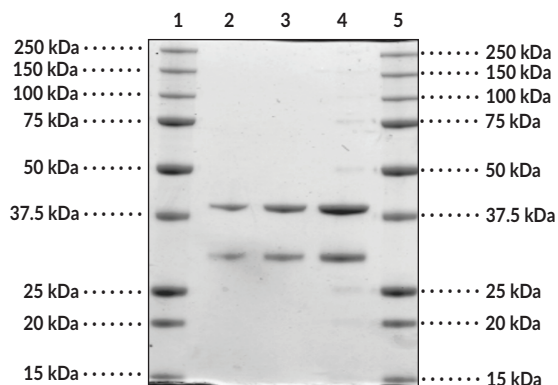
Item No. 22673

### Overview and Properties

**Synonyms:** SCS, Succinate Thiokinase, Succinyl Coenzyme A Synthetase  
**Source:** Active *E. coli* (strain K12) C-terminal His-tagged Succinyl-CoA synthetase enzyme purified from *E. coli*  
**Uniprot Nos.:** POA836, POAGE9  
**Molecular Weight:** 29.8 kDa ( $\alpha$ ), 41.4 kDa ( $\beta$ )  
**Storage:** -80°C (as supplied); avoid freeze/thaw cycles by storing protein in aliquots  
**Stability:**  $\geq 1$  year  
**Purity:** **batch specific** ( $\geq 85\%$  estimated by SDS-PAGE)  
**Supplied in:** 50 mM HEPES, pH 8.0, 150 mM sodium chloride, 20% glycerol  
**Protein Concentration:** **batch specific** mg/ml  
**Activity:** **batch specific** U/ml  
**Specific Activity:** **batch specific** U/mg  
**Unit Definition:** One unit is defined as the amount of enzyme required to produce 1 nmol NADH per minute at 25°C 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.<sup>1</sup>

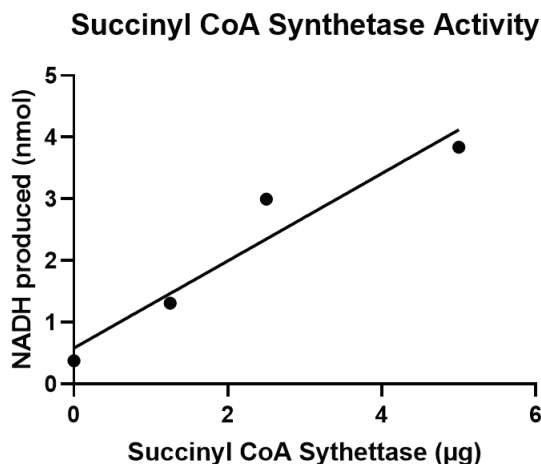
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Images



Lane 1: MW Markers  
Lane 2: Succinyl-CoA synthetase (1  $\mu$ g)  
Lane 3: Succinyl-CoA synthetase (2  $\mu$ g)  
Lane 4: Succinyl-CoA synthetase (4  $\mu$ g)  
Lane 5: MW Markers

Representative gel image shown; actual purity may vary between each batch.



WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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# PRODUCT INFORMATION



## Description

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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).<sup>2</sup> 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.

## References

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1. Schürmann, M., Wübbeler, J.H., Grote, J., *et al.* Novel reaction of succinyl coenzyme A (Succinyl-CoA) synthetase: activation of 3-sulfinopropionate to 3-sulfinopropionyl-CoA in *Advenella mimigardefordensis* strain DPN7T during degradation of 3,3'-dithiodipropionic acid. *J. Bacteriol.* **193(12)**, 3078-3089 (2011).
2. Joyce, M.A., Fraser, M.E., Brownie, E.R., *et al.* Probing the nucleotide-binding site of *Escherichia coli* succinyl-CoA synthetase. *Biochemistry* **38(22)**, 7273-7283 (1999).

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