



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# PRODUCT INFORMATION



## SCDase (*Shewanella alga*, recombinant)

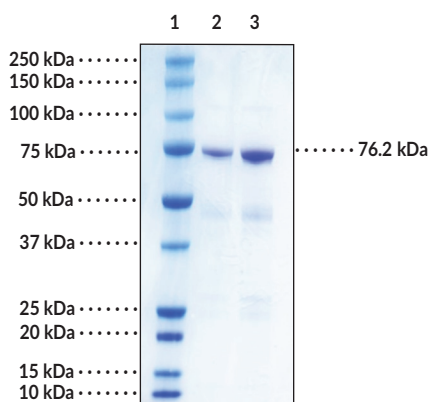
Item No. 38256

### Overview and Properties

<b>Synonyms:</b>	Ricin-type $\beta$ -trefoil Lectin Domain Protein, Sphingolipid Ceramide N-deacylase
<b>Source:</b>	Active recombinant <i>S. alga</i> C-terminal His-tagged SCDase expressed in <i>E. coli</i>
<b>Amino Acids:</b>	36-714
<b>Uniprot No.:</b>	NCBI Reference Sequence WP_144223911.1
<b>Molecular Weight:</b>	76.2 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	$\geq 1$ year
<b>Purity:</b>	$\geq 50\%$ estimated by SDS-PAGE
<b>Supplied in:</b>	50 mM sodium acetate, pH 6.0, with 0.1% Triton X-100 and 1 mM calcium chloride
<b>Protein Concentration:</b>	<i>batch specific</i> mg/ml
<b>Activity:</b>	<i>batch specific</i> U/ml
<b>Specific Activity:</b>	<i>batch specific</i> U/mg
<b>Unit Definition:</b>	One unit is defined as the amount of enzyme required to hydrolyze 1 $\mu$ mol of asialo ganglioside $G_{M1}$ per minute at pH 6.0 and 30°C.

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

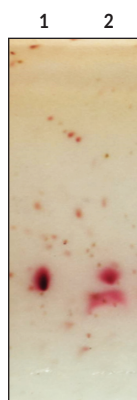
### Images



Lane 1: MW Markers  
Lane 2: SCDase (2  $\mu$ g)  
Lane 3: SCDase (4  $\mu$ g)

SDS-PAGE Analysis of SCDase.

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



Lane 1:  $G_{M1}$  substrate (no enzyme control reaction)  
Lane 2: 30 min conversion using 1.5 mM substrate (loaded 2  $\mu$ l)

**TLC Analysis of  $G_{M1}$  Conversion by Purified SCDase.** Assay was performed in 50  $\mu$ l end volume containing 50  $\mu$ g of SCDase enzyme with substrate  $G_{M1}$  (1.5 mM) in the assay buffer (50 mM sodium acetate buffer, pH 6.3, containing 100 mM calcium chloride and 0.1% Triton X-100). The reaction was incubated in a thermoshaker (300 rpm) at 30°C for 30 minutes. Analysis was done in a TLC plate (Analtech, 2.5 x 10 cm) using the solvent chloroform:methanol: 0.02% aqueous calcium chloride of 65:35:7.5.

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.

Copyright Cayman Chemical Company, 05/30/2023

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

---

Sphingolipid ceramide N-deacylase (SCDase) is an enzyme that catalyzes the hydrolysis or synthesis of the N-acyl linkage between the fatty acyl chain and sphingosine base in glycosphingolipids and sphingomyelin but not in free ceramide.<sup>1,2</sup> It has a broad substrate specificity for both hydrolysis and synthesis with preferences for glycosphingolipids with large sugar moieties and charged head groups for the hydrolysis reaction and glycosphingolipids with more polar head groups for the synthesis reaction. SCDase has been used as a biocatalyst for the synthesis and hydrolysis of glycosphingolipids.<sup>1,3</sup> Cayman's SCDase (*Shewanella alga*, recombinant) protein can be used for bioconversion and enzyme activity assay applications.

## References

---

1. Han, Y.-B., Wu, L., Rich, J.R., *et al.* Comprehensive characterization of sphingolipid ceramide N-deacylase for the synthesis and fatty acid remodeling of glycosphingolipids. *Appl. Microbiol. Biotechnol.* **99**(16), 6715-6726 (2015).
2. Ito, M., Kurita, T., and Kita, K. A novel enzyme that cleaves the N-acyl linkage of ceramides in various glycosphingolipids as well as sphingomyelin to produce their lyso forms. *J. Biol. Chem.* **270**(41), 24370-24374 (1995).
2. Chakrabertyk, R., Reiz, B., and Cairo, C.W. Profiling of glycosphingolipids with SCDase digestion and HPLC-FLD-MS. *Anal. Biochem.* **631**, 114361 (2021).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM