

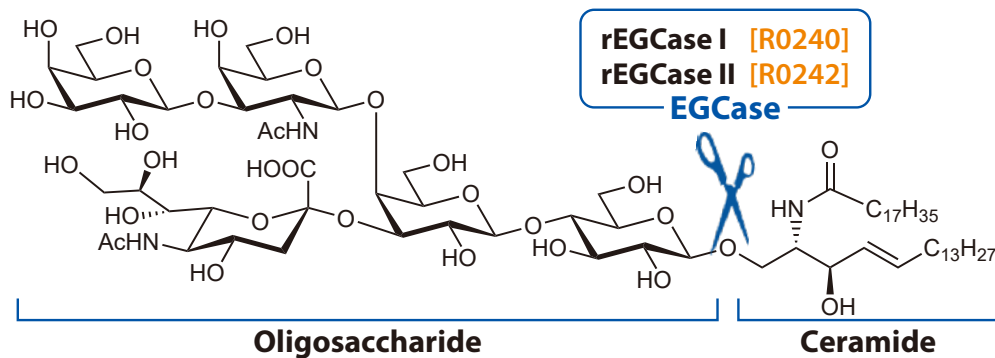
# Endoglycoceramidase

## Hydrolytic Enzymes Specific to Glycosphingolipids

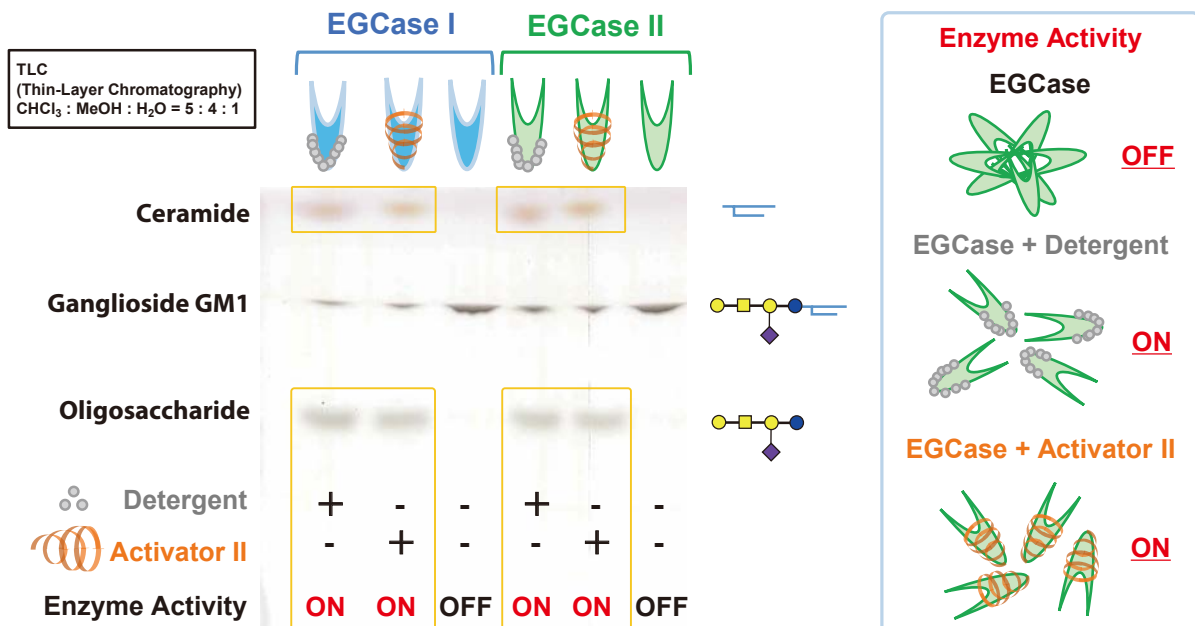
rEGCase I	300 mU/vial [R0240]
rEGCase II	100 mU/vial [R0242]
rEGCase I assisted by Activator II	300 mU/vial [R0241]
rEGCase II assisted by Activator II	100 mU/vial [R0243]

Endoglycoceramidase (EGCase) is a glycolipid-specific hydrolase that cleaves the glycosidic linkage between oligosaccharide and ceramide of various glycosphingolipids (GSLs).

### Activity of EGCase (Ex.: Ganglioside GM1)



### Hydrolysis reaction of GM1 using EGCases



Recombinant EGCase (rEGCase) is activated under a detergent-dependent condition. On the other hand, Activator II is capable of inducing activity of EGCases without any detergent reagents. By the use of Activator II, GSLs on cell surfaces of living cells could be hydrolyzed without cell disruption caused by detergent.

The products were commercialized under license from Kyushu University.

# Endoglycoceramidase

## Hydrolytic Enzymes Specific to Glycosphingolipids

### Substrate specificities of rEGCase I and rEGCase II

Reaction time (h)	rEGCase I				rEGCase II			
	1		16		1		16	
	0.4	4	0.4	4	0.4	4	0.4	4
Enzyme (mU)								
Substrates	Hydrolysis (%)							
Ganglio-series								
GM1	89	100	100	100	82	100	93	100
Asialo GM1	63	100	100	100	82	100	100	100
Fucosyl GM1	54	92	92	96	20	38	27	52
GM3	100	100	100	100	100	100	100	100
GD1	79	97	90	100	78	90	86	91
GT1	35	78	83	86	62	63	78	81
Globo-series								
Gb4	4	29	26	60	4	16	6	20
Lacto-series								
LacCer	50	64	81	100	63	81	83	100
Cerebrosides								
GlcCer	0	5	5	27	0	0	0	0
GalCer	0	0	0	0	0	0	0	0

Each substrate (4 nmol) was incubated with EGCase and 0.1% Triton™ X-100 at 37°C.

These data were provided by Prof. Makoto Ito and Dr. Yohei Ishibashi, Kyushu University.

#### References

- 1) M. Ito, T. Yamagata, *J. Biol. Chem.* **1986**, *261*, 14278.  
[https://doi.org/10.1016/S0021-9258\(18\)67015-2](https://doi.org/10.1016/S0021-9258(18)67015-2)
- 2) M. Ito, T. Yamagata, *J. Biol. Chem.* **1989**, *264*, 9510.  
[https://doi.org/10.1016/S0021-9258\(18\)60561-7](https://doi.org/10.1016/S0021-9258(18)60561-7)
- 3) Y. Ishibashi, U. Kobayashi, A. Hijikata, K. Sakaguchi, H. M. Goda, T. Tamura, N. Okino, M. Ito, *J. Lipid Res.* **2012**, *53*, 2242.  
<https://doi.org/10.1194/jlr.D028951>
- 4) M. Ito, Y. Ikegami, T. Tai, T. Yamagata, *Eur. J. Biochem.* **1993**, *218*, 637.  
<https://doi.org/10.1111/j.1432-1033.1993.tb18417.x>
- 5) M. Ito, Y. Ikegami, T. Yamagata, *Eur. J. Biochem.* **1993**, *218*, 645.  
<https://doi.org/10.1111/j.1432-1033.1993.tb18418.x>

#### Related Products

**Ganglioside GM<sub>1</sub>**  
**TRITON™ X-100**

Contact us [**G0483**]  
5g / 25g [**P1775**]

For further information please refer to our website at [www.TCIchemicals.com](http://www.TCIchemicals.com).

TCI EGCase



#### Ordering and Customer Service

##### TCI AMERICA

Tel : 800-423-8616 / 503-283-1681  
Fax : 888-520-1075 / 503-283-1987  
E-mail : Sales-US@TCIchemicals.com

##### TCI EUROPE N.V.

Tel : +32 (0)3 735 07 00  
Fax : +32 (0)3 735 07 01  
E-mail : Sales-EU@TCIchemicals.com

##### TCI Deutschland GmbH

Tel : +49 (0)6196 64053-00  
Fax : +49 (0)6196 64053-01  
E-mail : Sales-DE@TCIchemicals.com

##### Tokyo Chemical Industry UK Ltd.

Tel : +44 (0)1865 78 45 60  
E-mail : Sales-UK@TCIchemicals.com

##### 梯希爱(上海)化成工业发展有限公司

Tel : 800-988-0390 / 021-67121386  
Fax : 021-6712-1385  
E-mail : Sales-CN@TCIchemicals.com

##### Tokyo Chemical Industry (India) Pvt. Ltd.

Tel : 1800 425 7889 / 044-2262 0909  
E-mail : Sales-IN@TCIchemicals.com

##### TOKYO CHEMICAL INDUSTRY CO., LTD.

Tel : +81 (0)3-5640-8878  
E-mail : globalbusiness@TCIchemicals.com

\* Chemicals itemized in this brochure are for research and testing use only. Please avoid use other than by chemically knowledgeable professionals. \* Information such as listed products and its specifications and so on are subject to change without prior notice. \* The contents may not be reproduced or duplicated in whole or in part without permission of Tokyo Chemical Industry Co., Ltd.