Anti-choline esterase activity of ceramides from the Red Sea Marine Sponge Mycale euplectellioides

Reda Abdelhameed,^{a,b} Mohamed Saleh Elgawish,^c Amira Mira,^d Amany K. Ibrahim,^b Safwat A. Ahmed,^b Kuniyoshi Shimizu,^e Koji Yamada,^{*a}

^a Graduate School of Biomedical Sciences, Nagasaki University, 1-14 Bunkyo-machi, Nagasaki 852-8521, Japan

^b Pharmacognosy Department, Faculty of Pharmacy, Suez Canal University, Ismailia 41522, Egypt

^c Medicinal Chemistry Department, Faculty of Pharmacy, Suez Canal University, Ismailia 41522, Egypt

^d Pharmacognosy Department, Faculty of Pharmacy, Mansoura University, Mansoura 35516, Egypt

^e Division of Systematic Forest and Forest Products Sciences, Department of agroenvironmental sciences, Faculty of Agriculture, Graduate School of Kyushu University, Fukouka 812-8581, Japan

*corresponding author

Email: kyamada@nagasaki-u.ac.jp

Tel: +81-95-819-2462

Fax: +81-95-819-2462

Table of Contents

Figure S1: ¹ H-NMR spectrum of MEC-1 (400 MHz, C ₅ D ₅ N)	3
Figure S2: 13 C-NMR spectra of MEC-1 (400 MHz, C ₅ D ₅ N)	4
Figure S3: FAB-MS (positive ion mode) of MEC-1	5
Figure S4: ¹ H-NMR spectrum of FAMEs after hydrolysis of MEC-1 (400 MHz, CDCl ₃)	6
Figure S5: ¹³ C-NMR spectrum of FAMEs after hydrolysis of MEC-1 (400 MHz, CDCl ₃)	7
Figure S6: EI-MS of FAMEs after hydrolysis of MEC-1	8
Figure S7: ¹ H-NMR spectrum of LCB after hydrolysis of MEC-1 (400 MHz, MeOD)	9
Figure S8: ¹³ C-NMR spectrum of LCB after hydrolysis of MEC-1 (400 MHz, MeOD)	10
Figure S9: FAB-MS (positive ion mode) of LCB after hydrolysis of MEC-1	11
Figure S10: Analytical HPLC chromatogram of MEC-1	12
Figure S11: FAB-MS (positive ion mode) of MEC-1-4	13
Figure S12: FAB-MS (positive ion mode) of MEC-1-7	14
Figure S13: FAB-MS (positive ion mode) of MEC-1-8	15



MEC-1

Figure S1: ¹H-NMR spectrum of MEC-1 (400 MHz, C₅D₅N)



Figure S2: ¹³C-NMR spectrum of MEC-1 (400 MHz, C₅D₅N)



Figure S3: FAB-MS (positive ion mode) of MEC-1



Figure S4: ¹H-NMR spectrum of FAMEs after hydrolysis of MEC-1 (400 MHz, CDCl₃)



Figure S5: ¹³C-NMR spectrum of FAMEs after hydrolysis of MEC-1 (400 MHz, CDCl₃)



Figure S6: EI-MS of FAMEs after hydrolysis of MEC-1



Figure S7: ¹H-NMR spectrum of LCB after hydrolysis of MEC-1 (400 MHz, MeOD)



Figure S8: ¹³C-NMR spectrum of LCB after hydrolysis of MEC-1 (400 MHz, MeOD)



Figure S9: FAB-MS (positive ion mode) of LCB after hydrolysis of MEC-1



Figure S10: Analytical HPLC chromatogram of MEC-1



Figure S11: FAB-MS (positive ion mode) of MEC-1-4



Figure S12: FAB-MS (positive ion mode) of MEC-1-7



Figure S13: FAB-MS (positive ion mode) of MEC-1-8