

Supplementary Materials for

Disulfides from the brown alga *Dictyopterus membranacea* suppress M1 macrophage activation by inducing AKT and suppressing MAPK/ERK signaling pathways

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Table S1. List of oligonucleotides used in real time PCR reactions.

Primer	Sequence
rsp9-Fwd	GCTAGACGAGAAGGATCCCC
Rsp9-Rev	CAGGCCAGCTTAAAGACCT
Arginase 1-Fwd	CAGAAGAATGGAAGAGTCAG
Arginase 1-Rev	CAGATATGCAGGGAGTCACC
MRC1-Fwd	TTCCATCGAGACTGCTGC
MRC1-Rev	ACCAAAGCCACTTCCCTTC
IRAK-M-Fwd	TTCTGGCACGTTTCAATCA
IRAK-M-Rev	CGCTGCAGCAAAATCCGTTA
iNOS-Fwd	TCCTGGAGGAAGTGGGCCGAAG
iNOS-Rev	CCTCCACGGGCCCGTACTC
TNF α -Fwd	GCCCACGTCGTAGCAAACCACC
TNF α -Rev	CGGGGCAGCCTTGTCCCTTG
Glut1-Fwd	AAAGAAGAGGGTCGGCAGAT
Glut1-Rev	CTGCCTTCTCGAAGATGCTC
Glut3-Fwd	GATCGGCTCTTCCAGTTTG
Glut3-Rev	GATCGGCTCTTCCAGTTTG
Pgc1 α -Fwd	ACCCTGCCATTGTTAAGACC
Pgc1 α -Rev	TGCTGCTGTTCTGTTTTTC
IL-6-Fwd	CAAAGCCAGAGTCCTTCAGAG
IL-6-Rev	CACTCCTTCTGTGACTCCAGC

Supplementary figures: Purity analysis of the isolated compounds

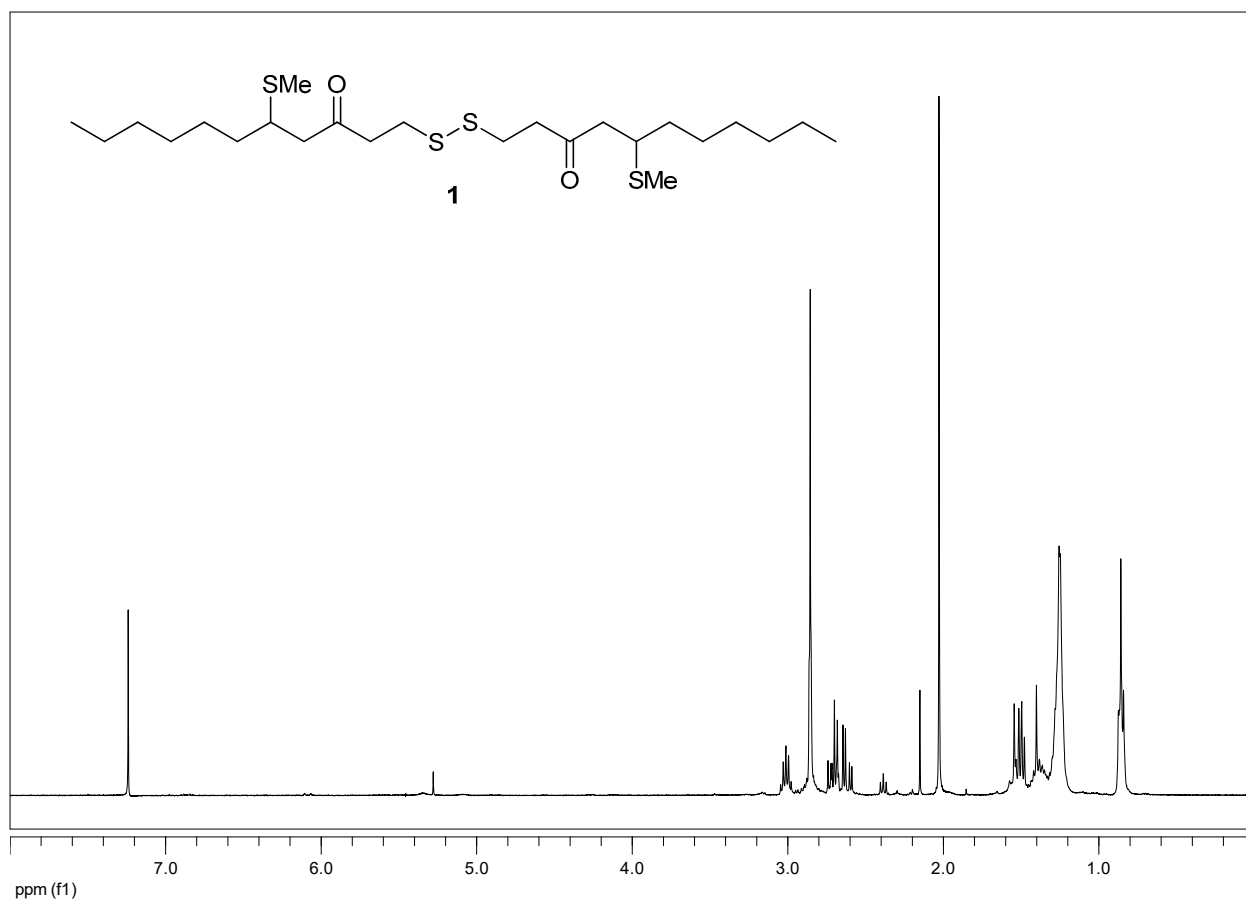


Figure S1. ¹H NMR spectrum (400 MHz, CDCl₃) of bis(5-methylthio-3-oxo-undecyl) disulfide (1).

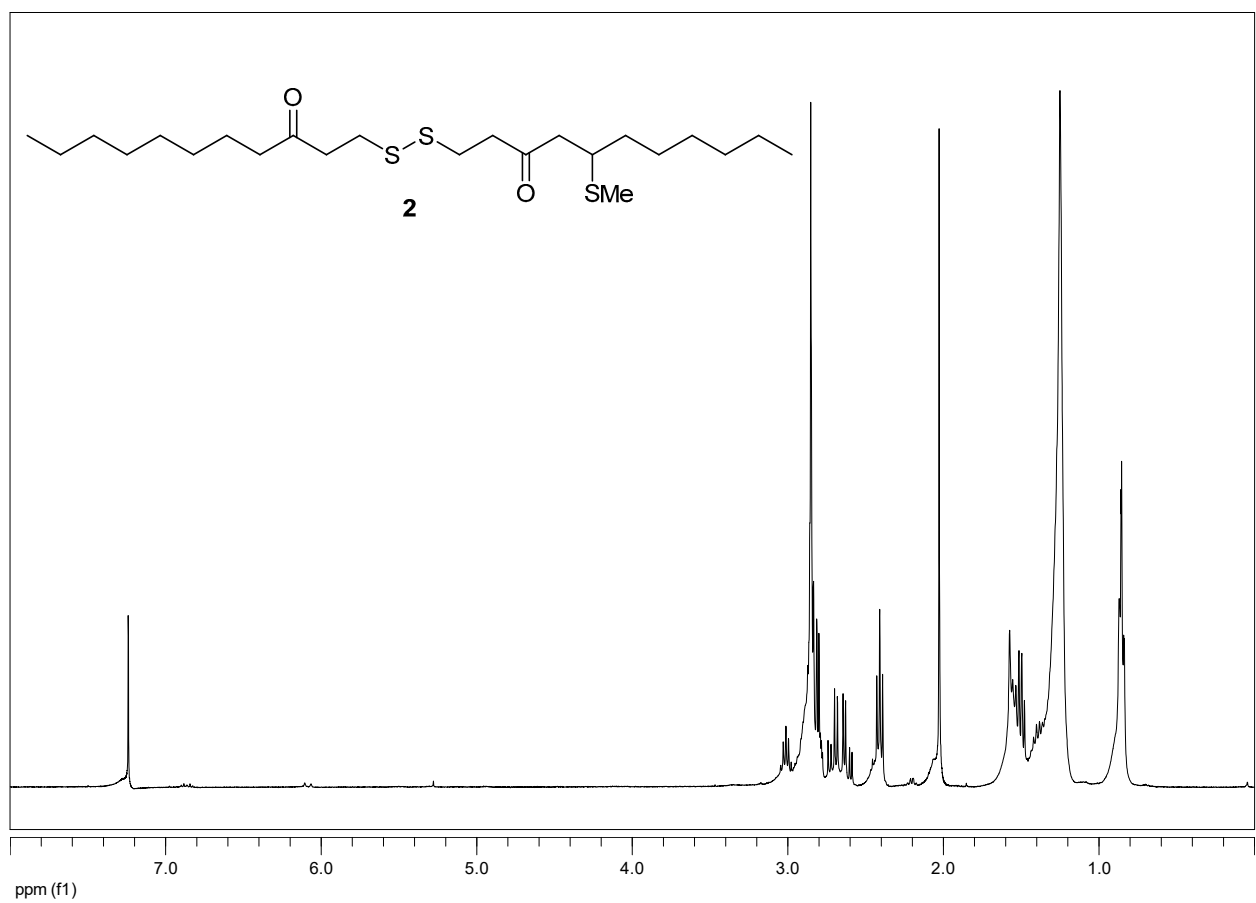


Figure S2. ¹H NMR spectrum (400 MHz, CDCl₃) of 5-methylthio-1-(3-oxoundecyl)disulfanylundecan-3-one (**2**).

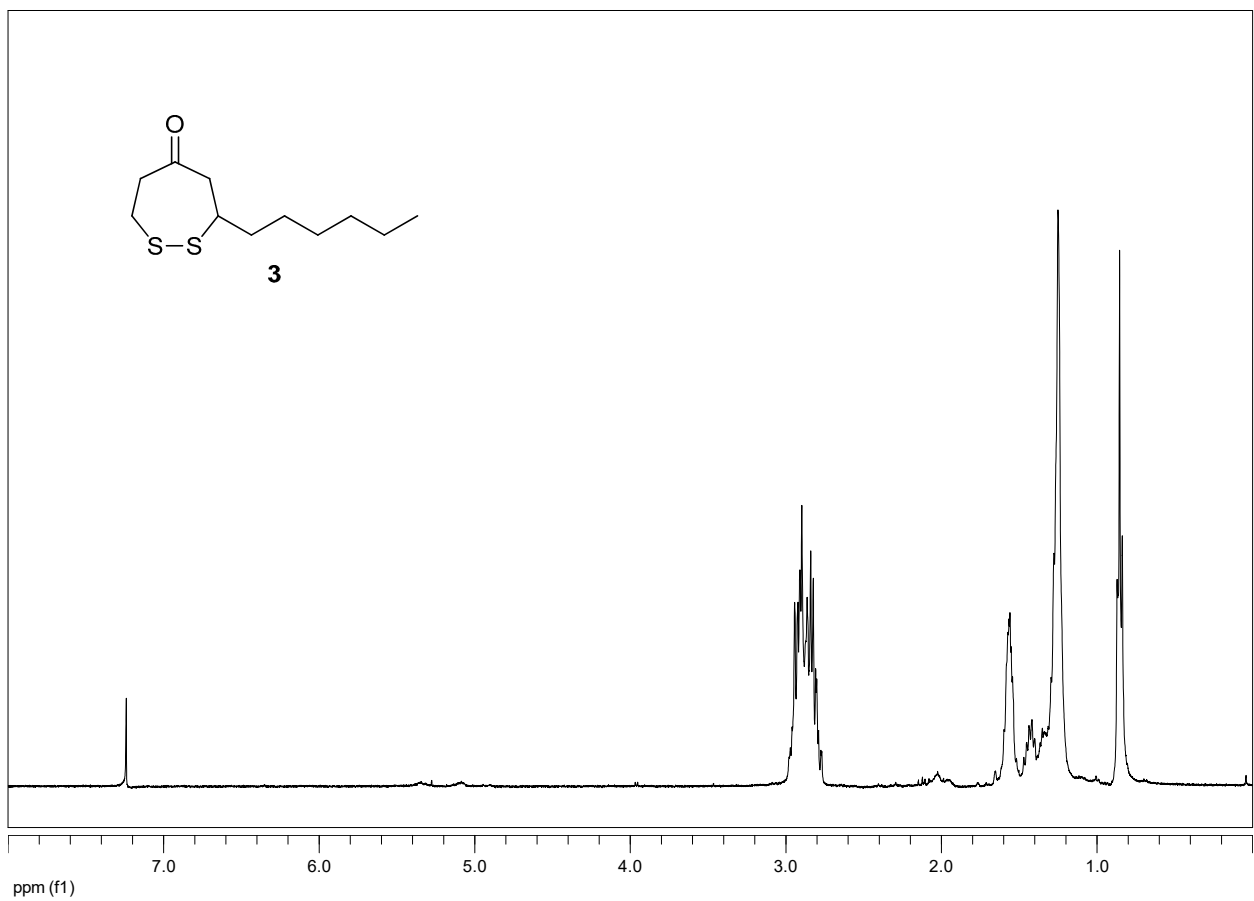


Figure S3. ¹H NMR spectrum (400 MHz, CDCl₃) of 3-hexyl-4,5-dithiacycloheptanone (**3**).