# A new thiopeptide antibiotic, micrococcin P3, from a marine-derived strain of the bacterium *Bacillus stratosphericus*

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**Figure S1.** HPLC chromatogram of micrococcins P1 (**2**) and P3 (**1**)

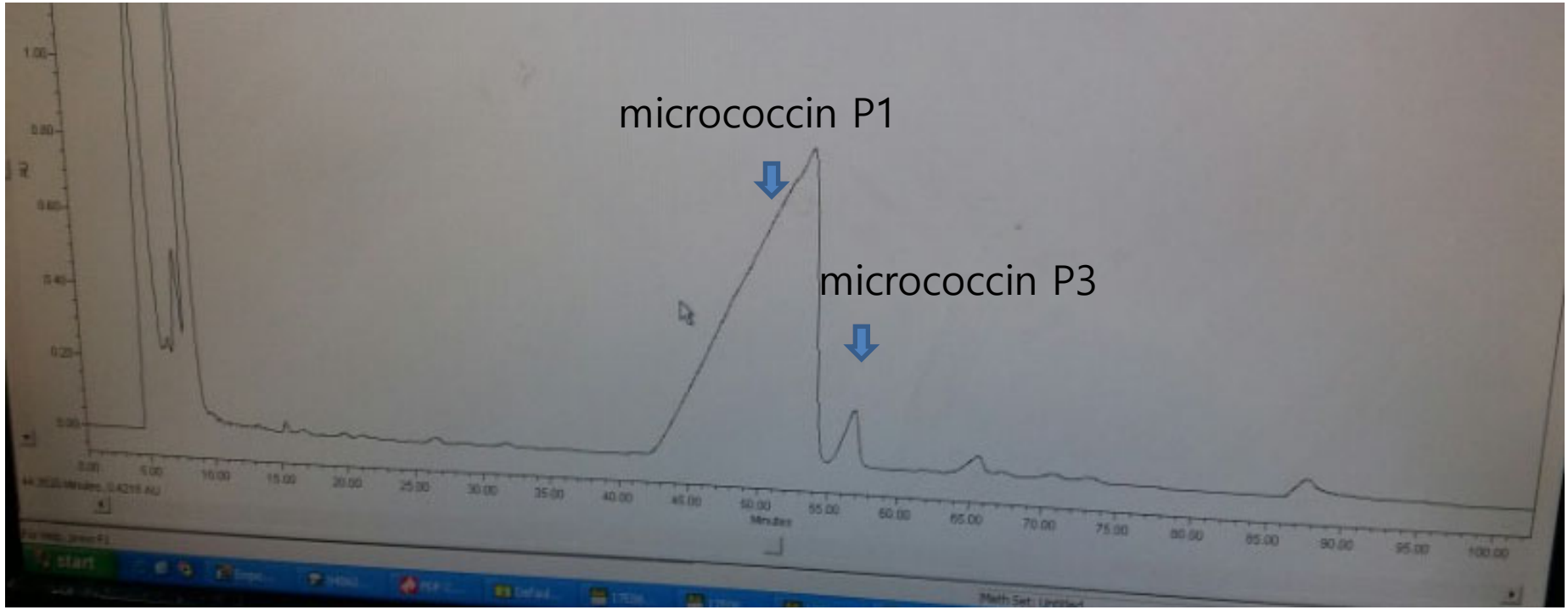

**Figure S2.** High resolution ESIMS spectra of micrococcin P3 (**1**)

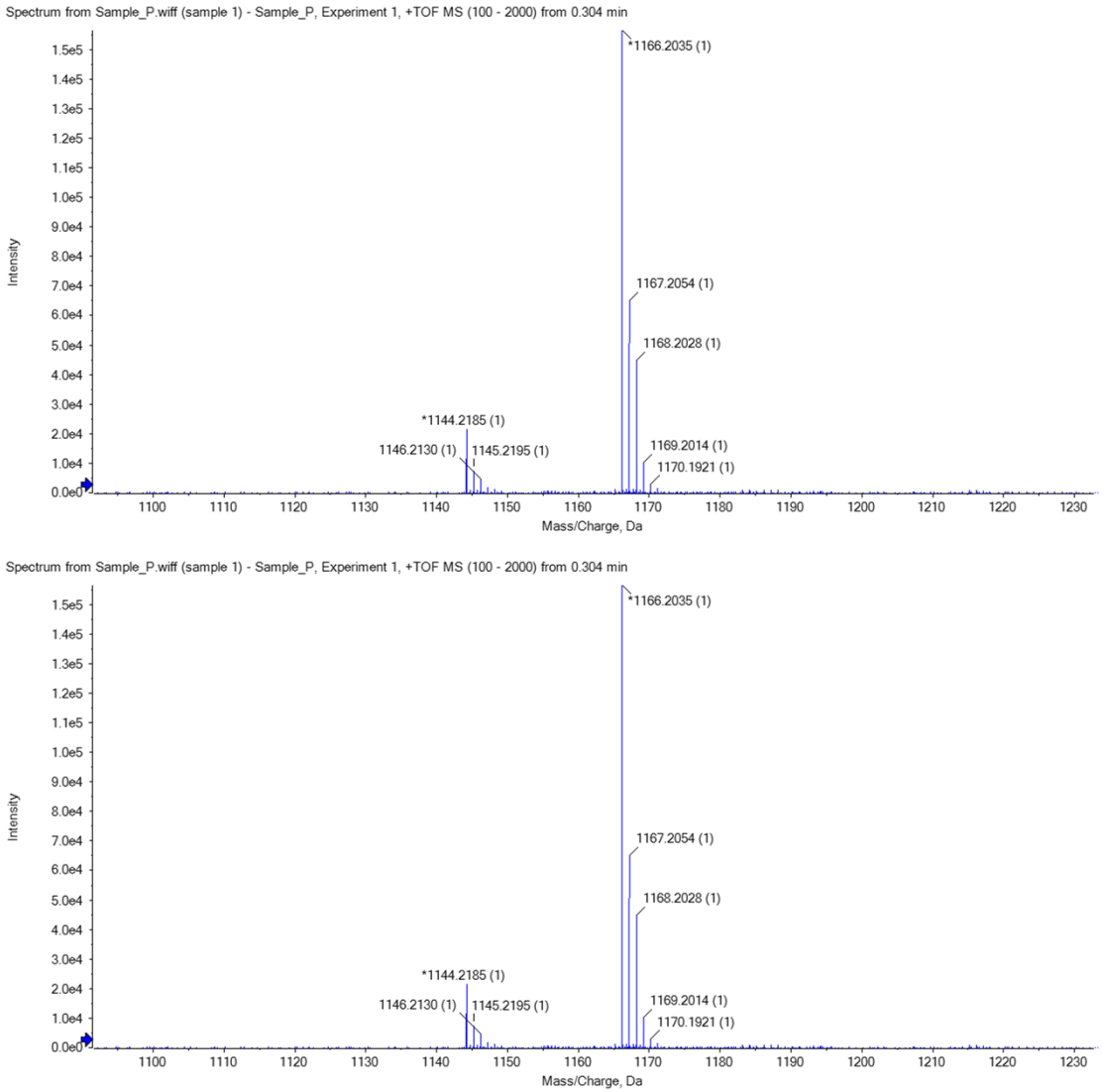

**Figure S3.** The bacterium 16L088-2 cultured on SYP agar

**Figure S4.** $^{1}$H NMR spectrum of micrococcin P3 (**1**)

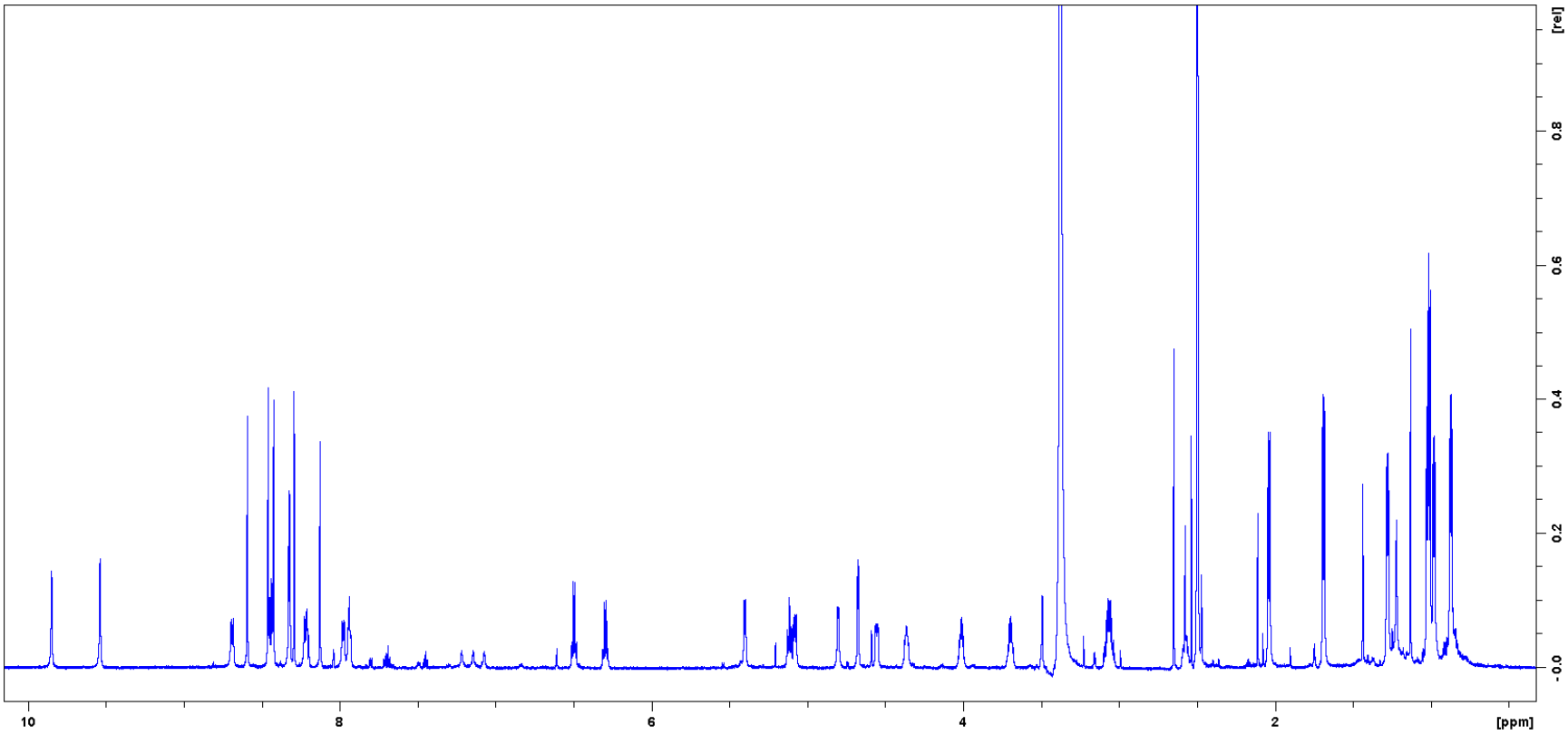

**Figure S5.** $^{13}C$ NMR spectrum of micrococcin P3 (**1**)

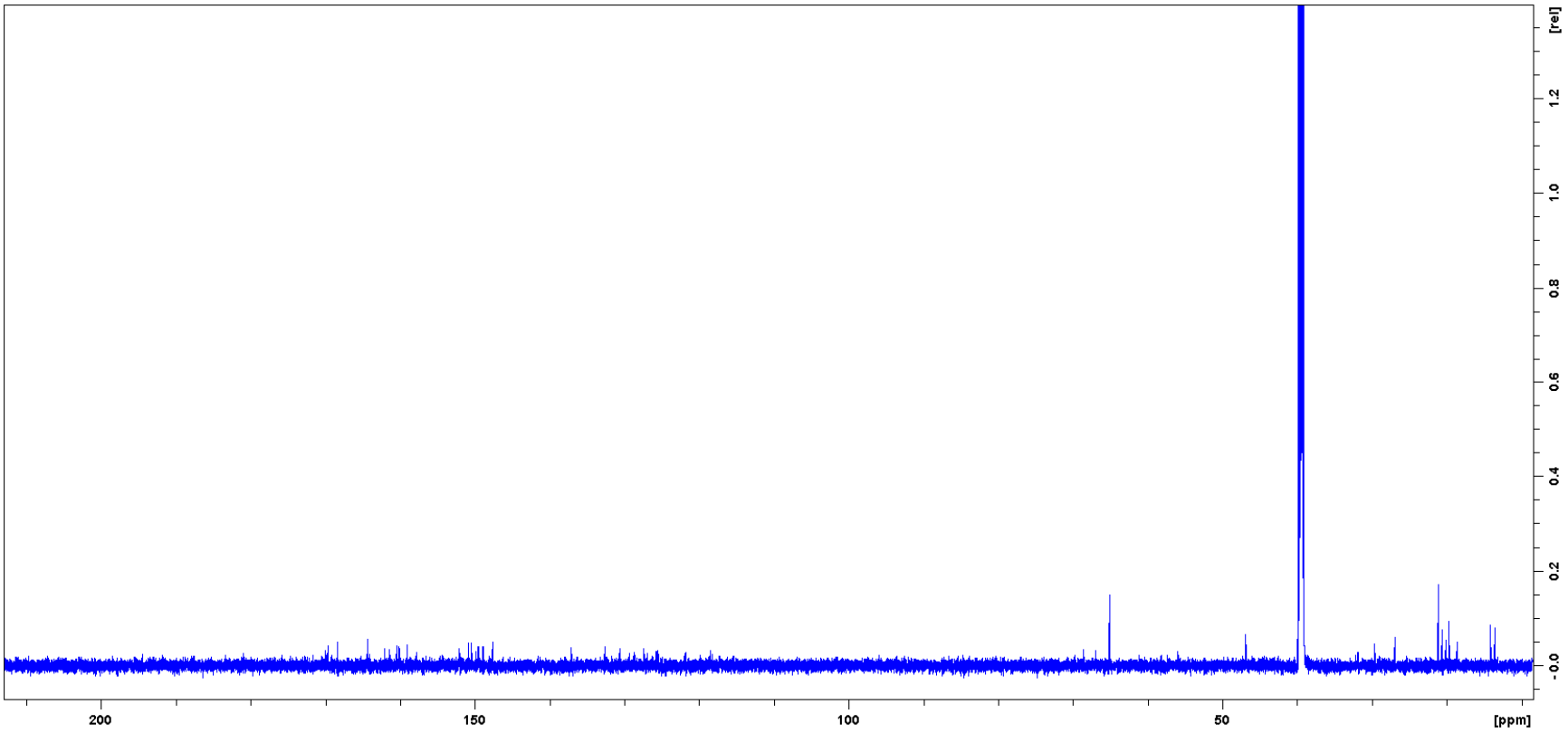

**Figure S6.** COSY spectrum of micrococcin P3 (**1**)

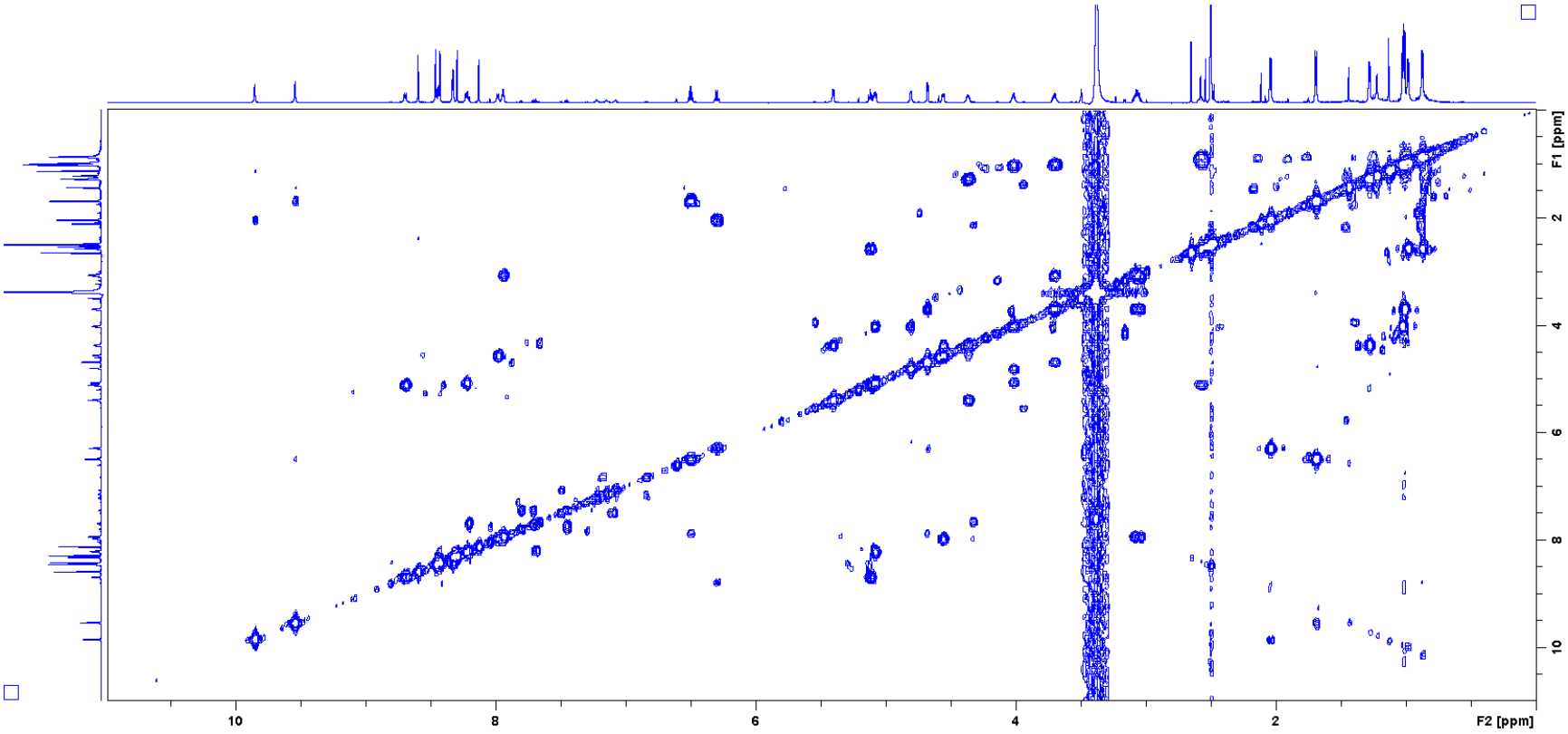

**Figure S7.** HSQC spectrum of micrococcin P3 (**1**)

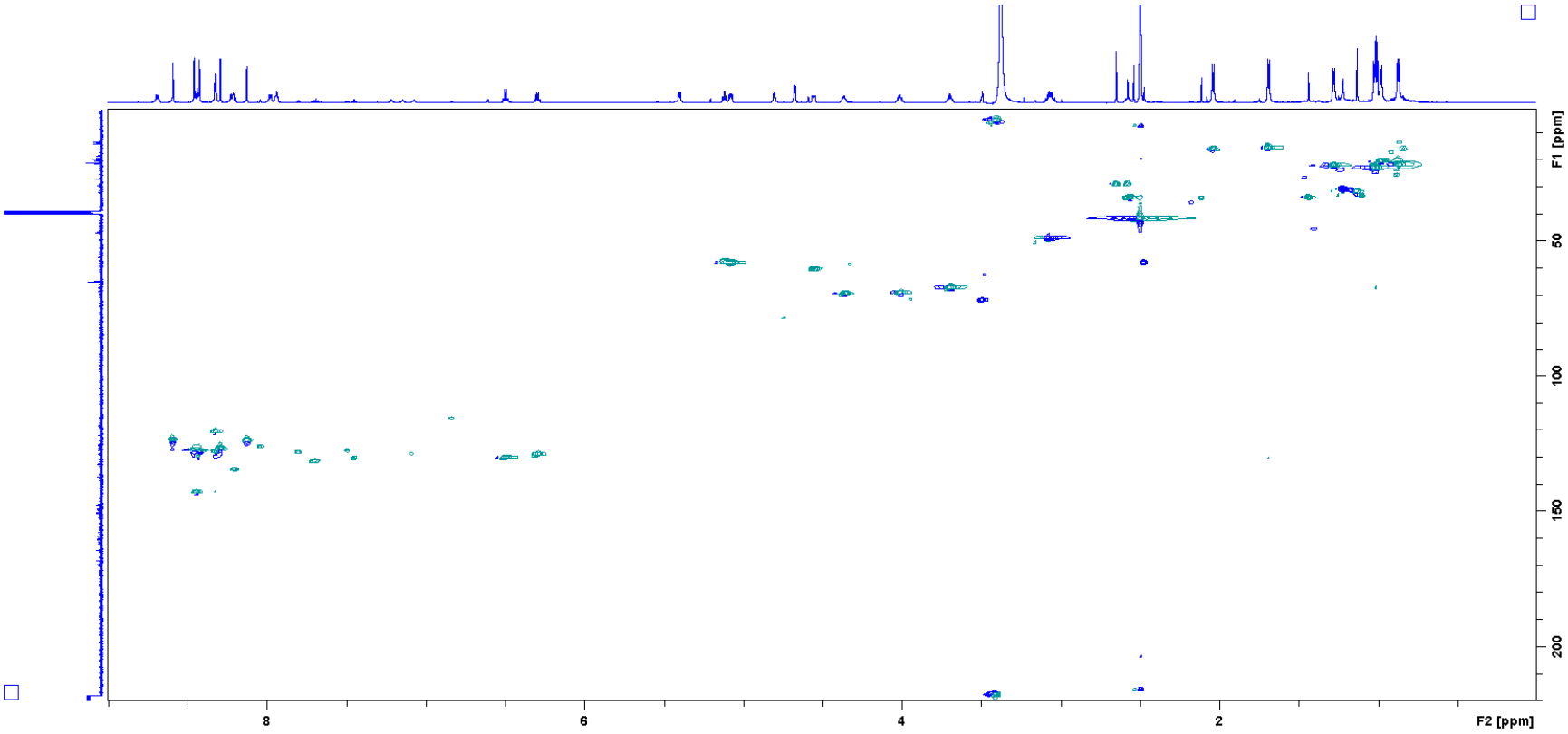

**Figure S8.** HMBC spectrum of micrococcin P3 (**1**)

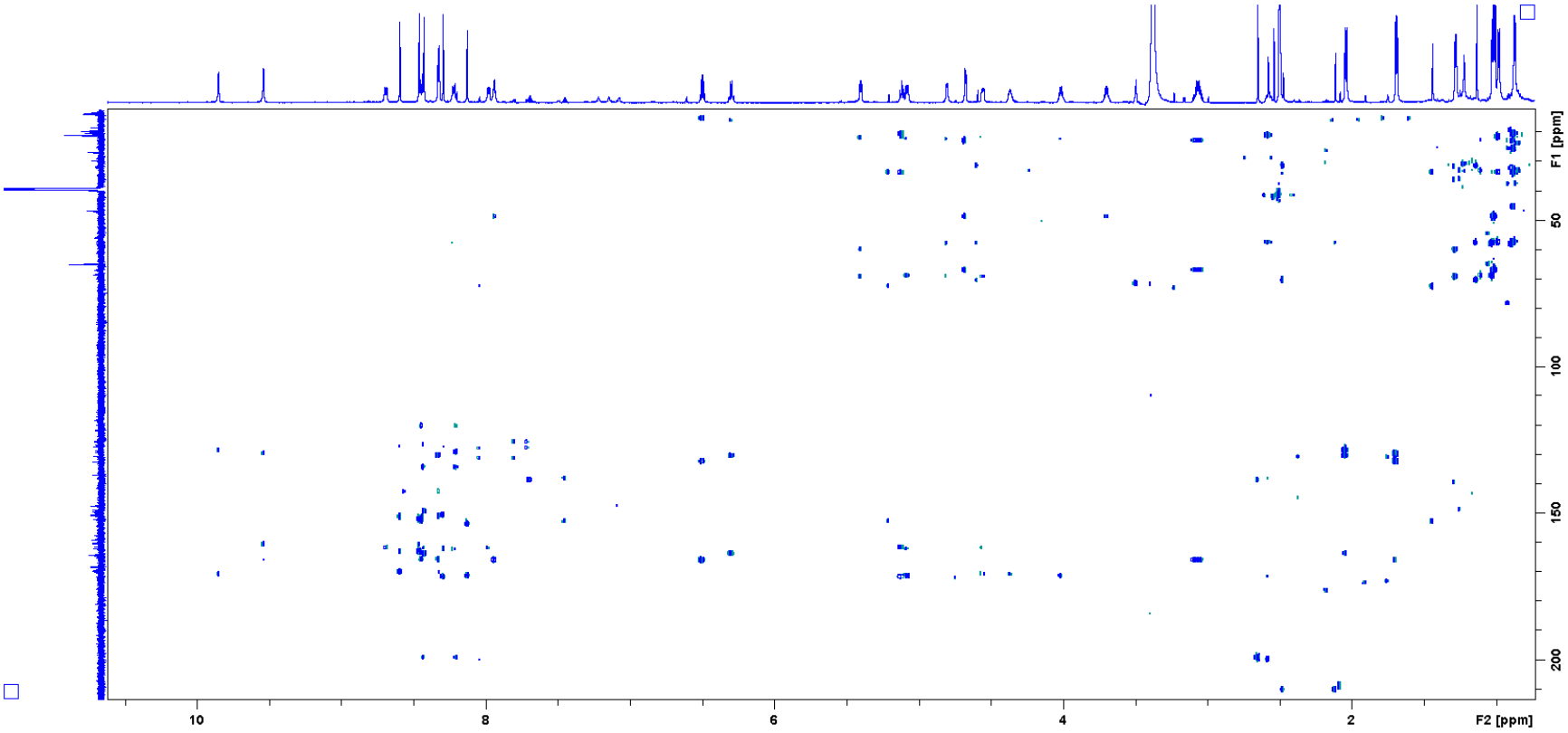

**Figure S9.** ROESY spectrum of micrococcin P3 (**1**)

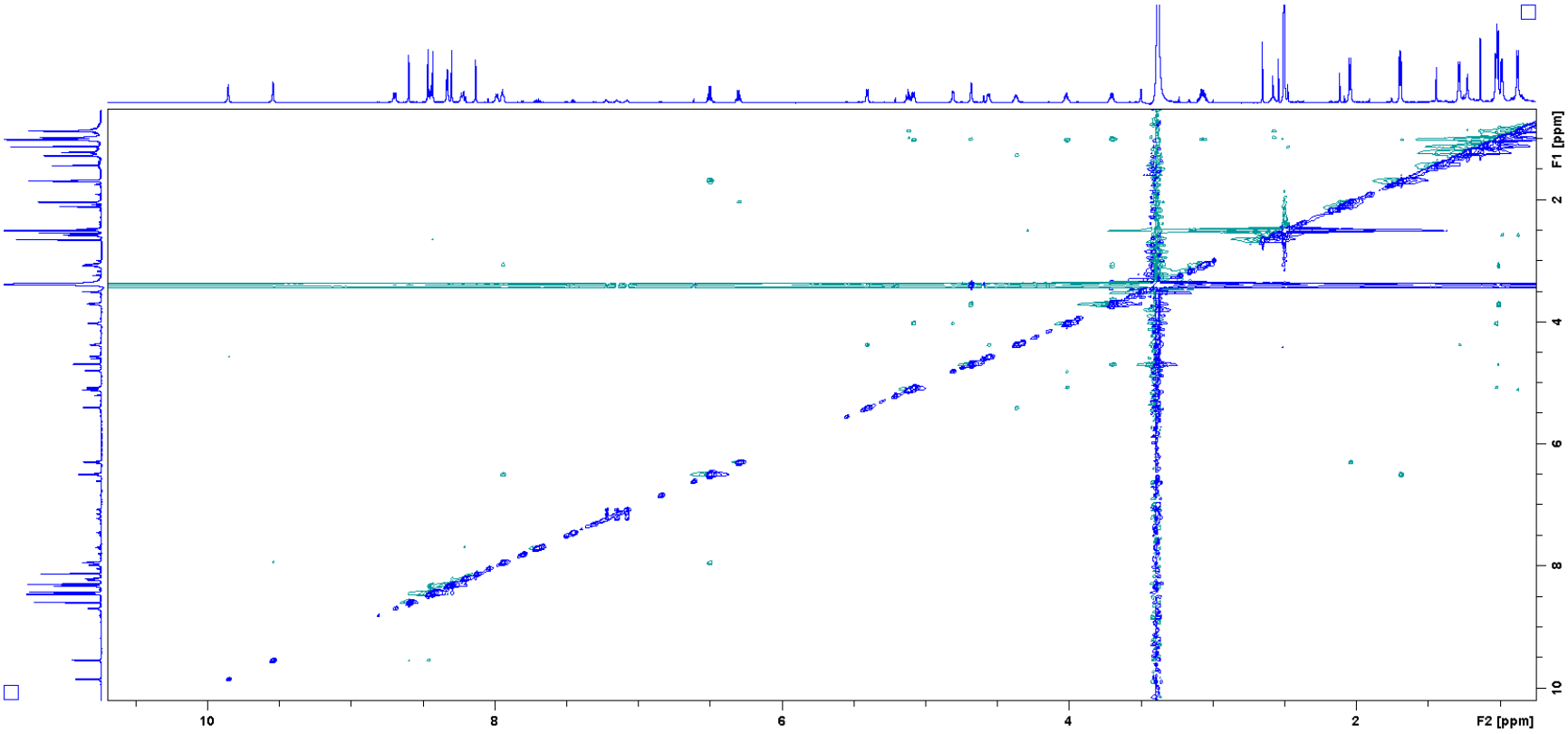

**Figure S10.** Expended ROESY spectrum of micrococcin P3 (**1**)

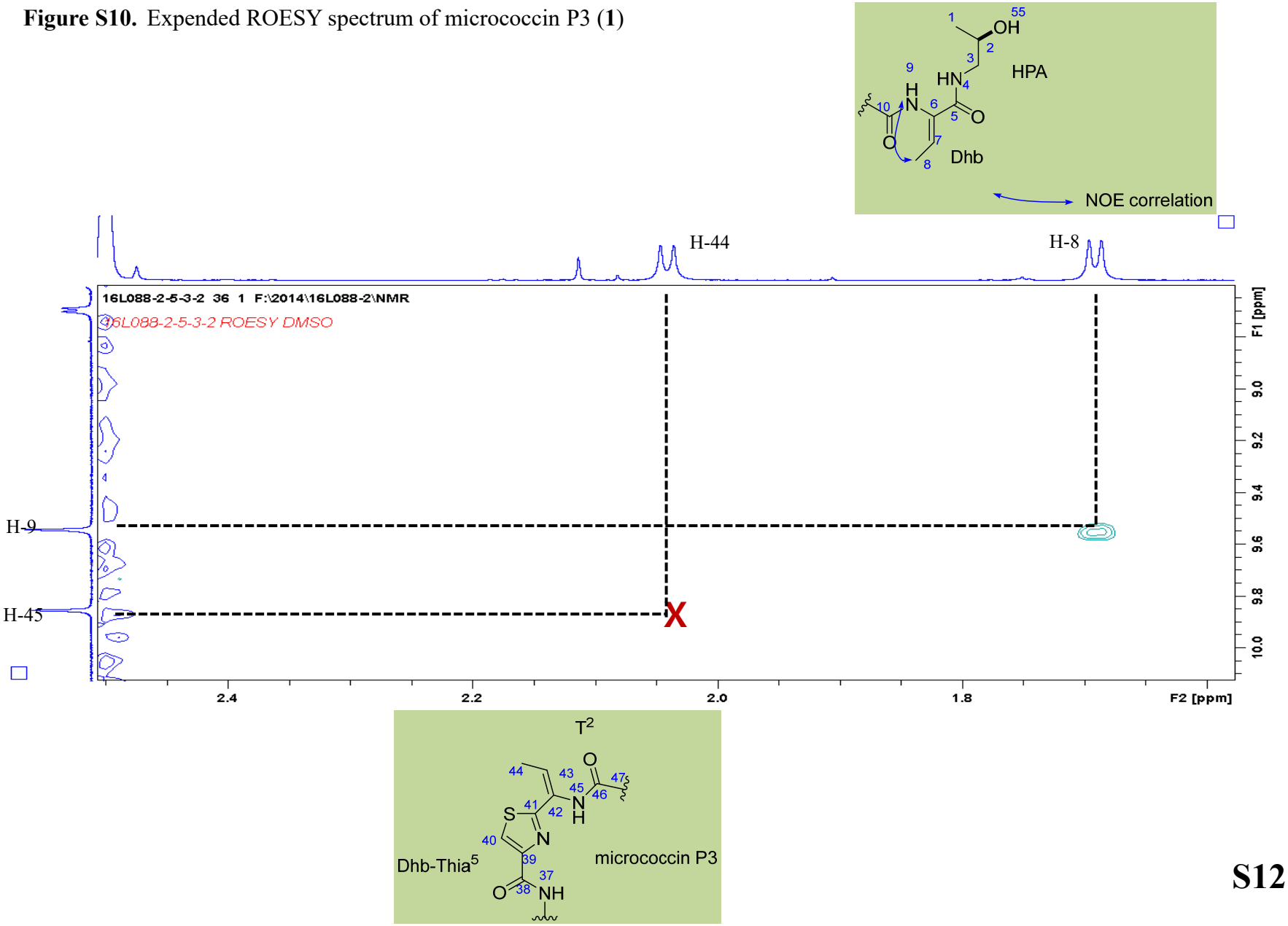

**Figure S11.** $^{1}$H NMR spectrum of micrococcin P1 (**2**)

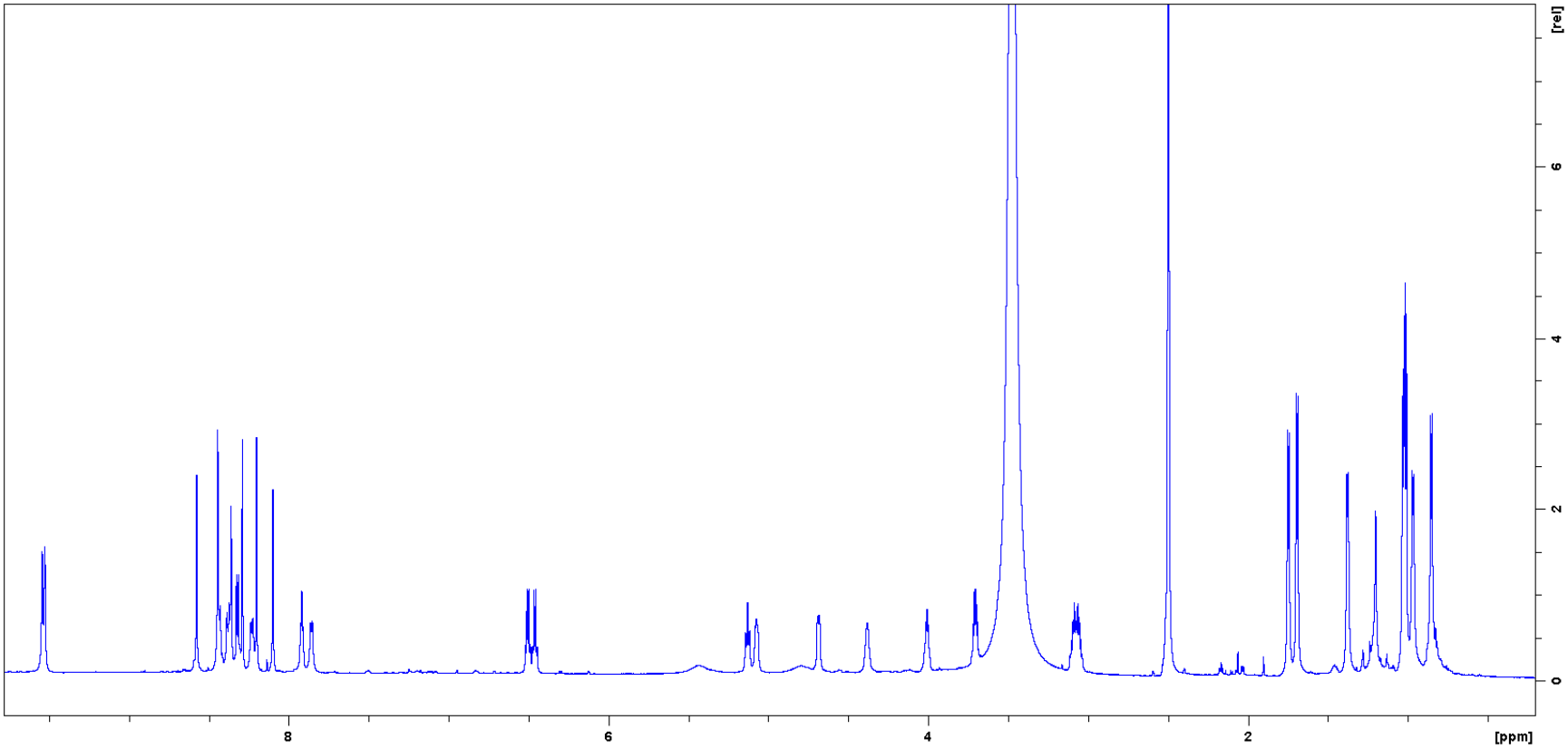

**Figure S12.** $^{13}C$ NMR spectrum of micrococcin P3 (**1**)

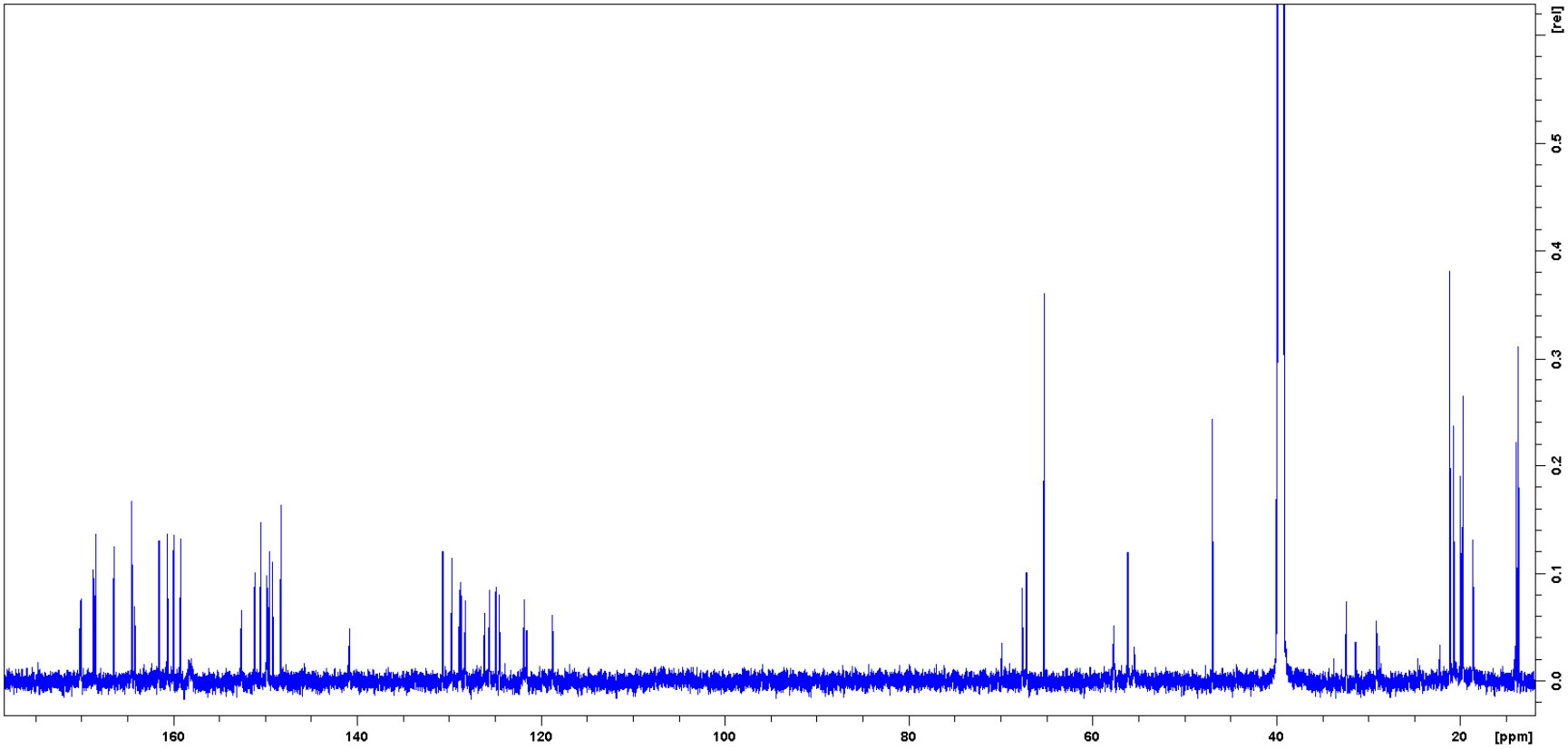

**Figure S13.** COSY spectrum of micrococcin P3 (**1**)

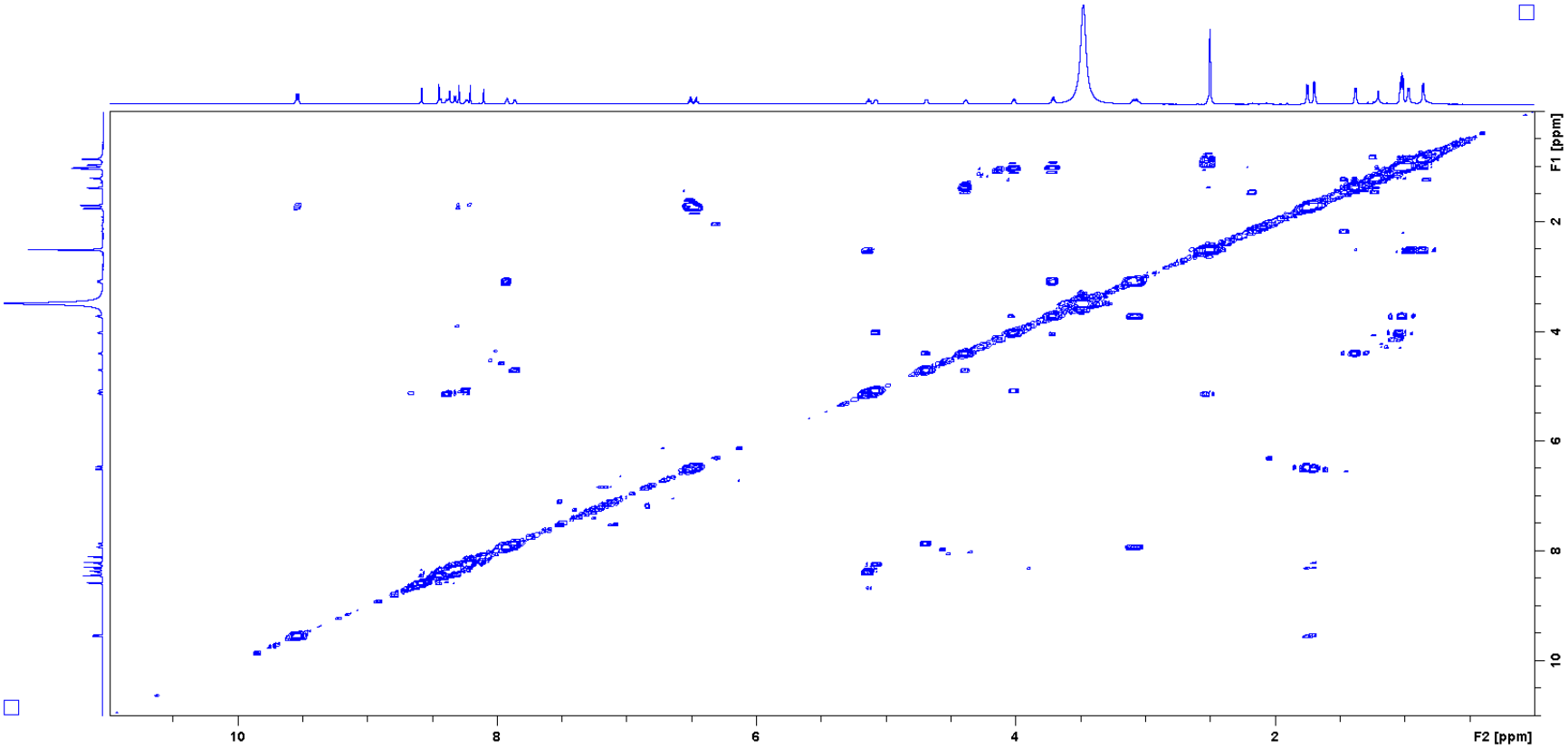

**Figure S14.** HSQC spectrum of micrococcin P3 (**1**)

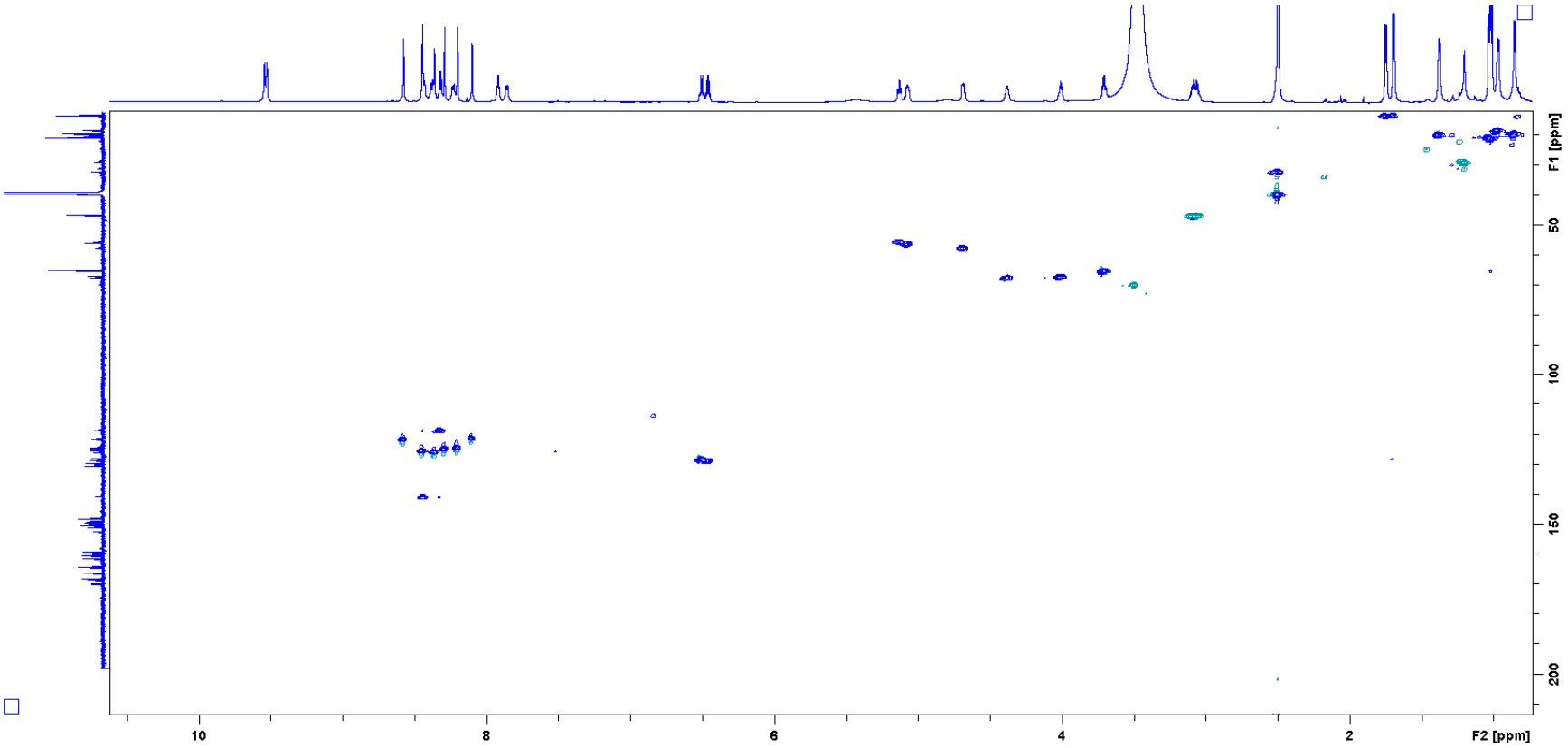

**Figure S15.** HMBC spectrum of micrococcin P3 (**1**)

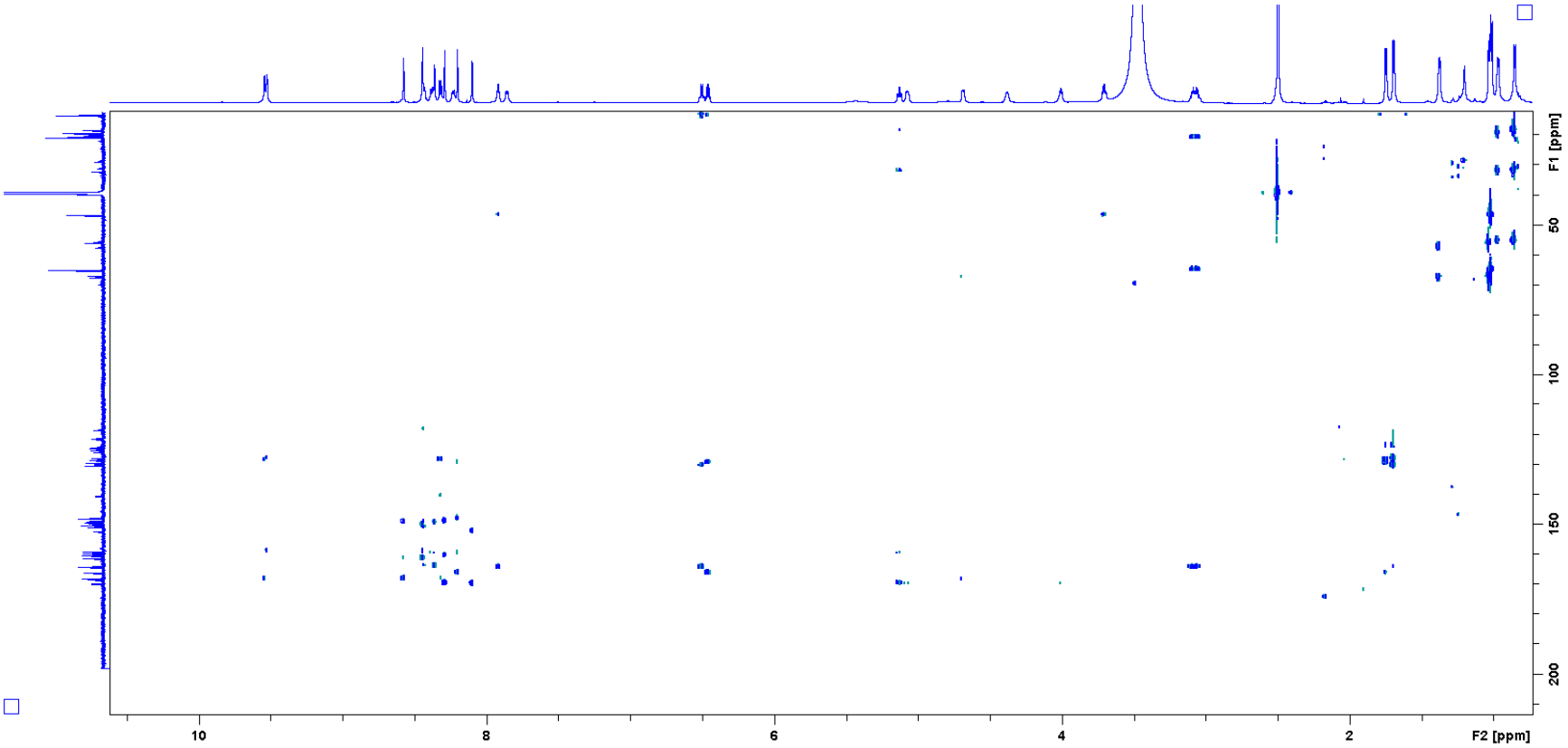

**Figure S16.** NOESY spectrum of micrococcin P3 (**1**)

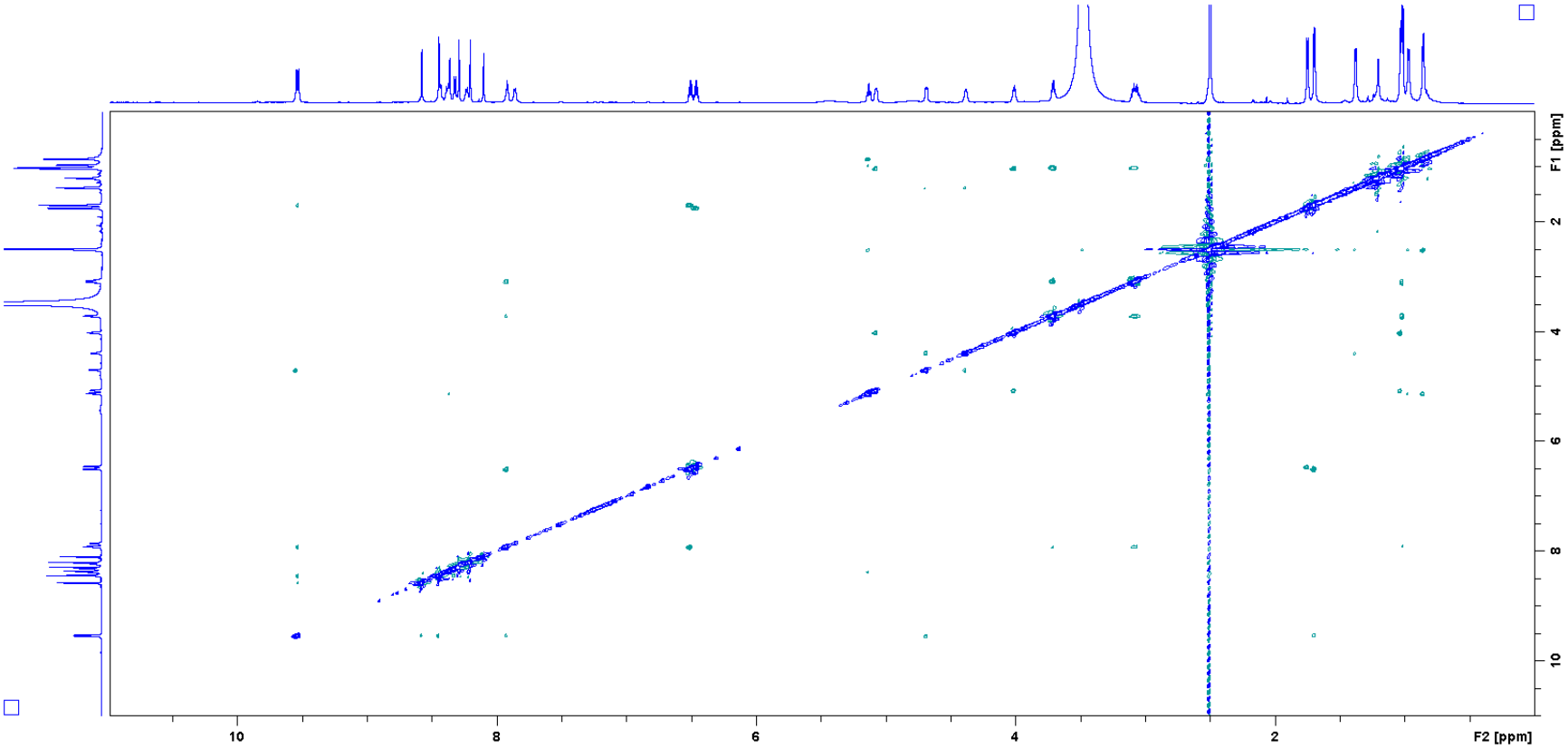

**Figure S17.** Expended ROESY spectrum of micrococcin P1 (**2**)

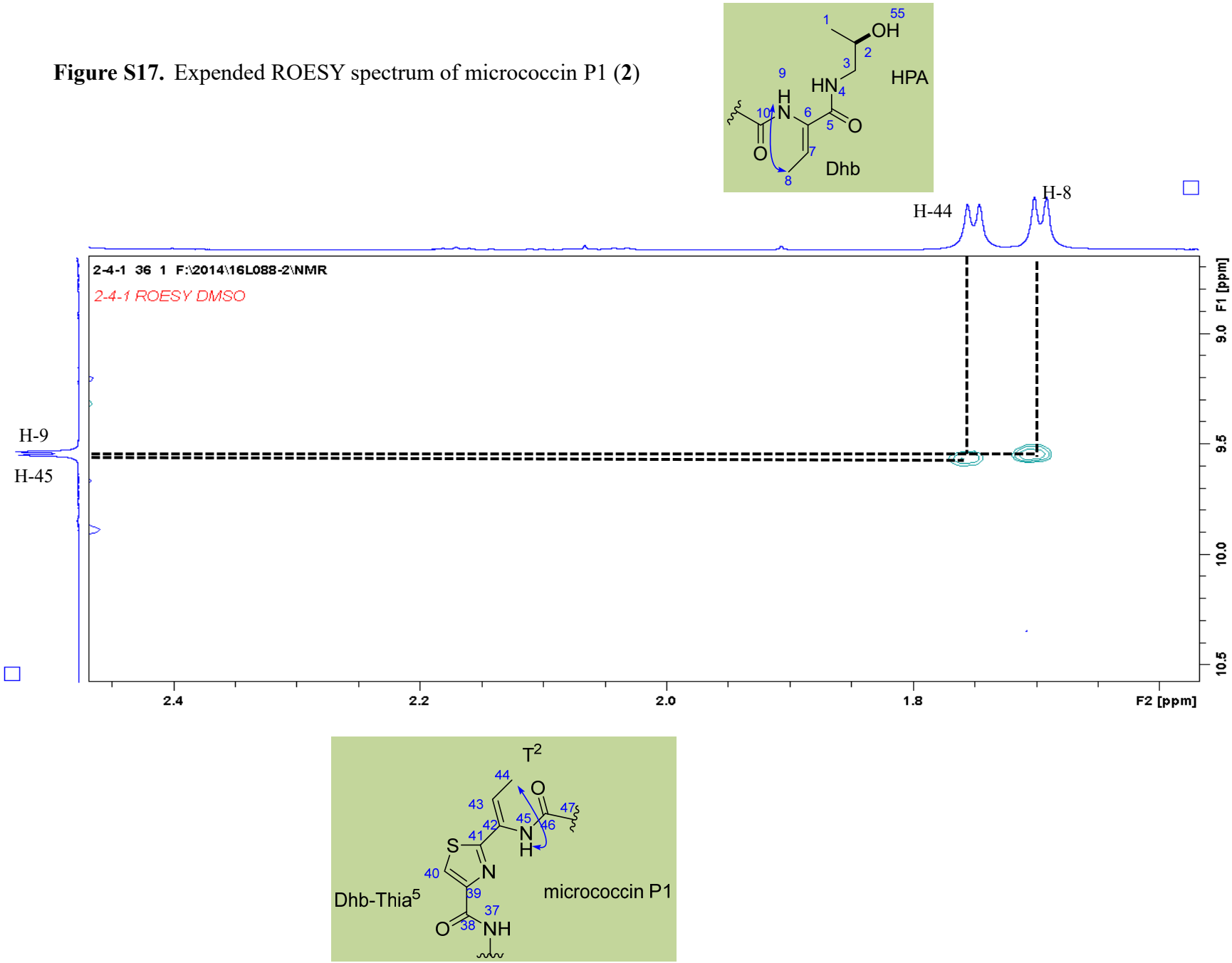

**Figure S18.** The effects of micrococcins P3 (**1**) and P1 (**2**) on the viability of CV-1 cells

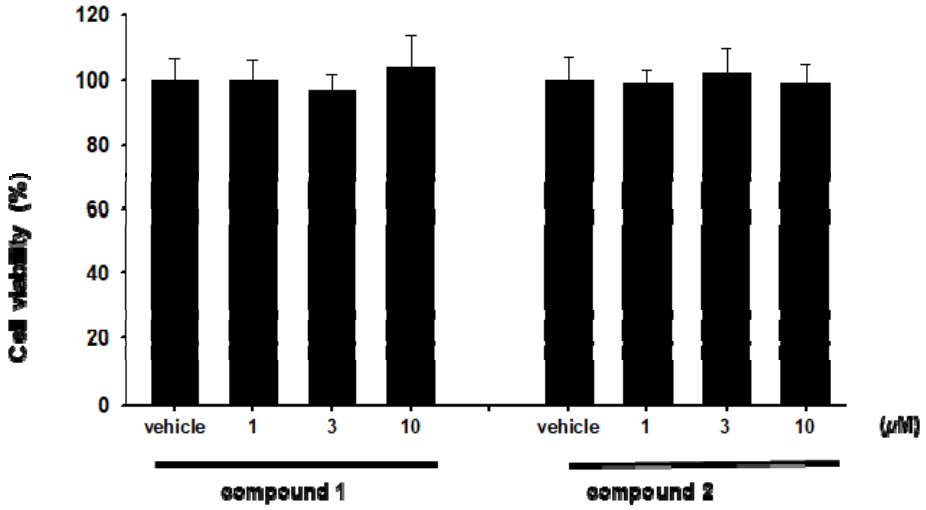

**Figure S19.** Key MS/MS fragments observed in the spectra of micrococcins P3 (**1**)

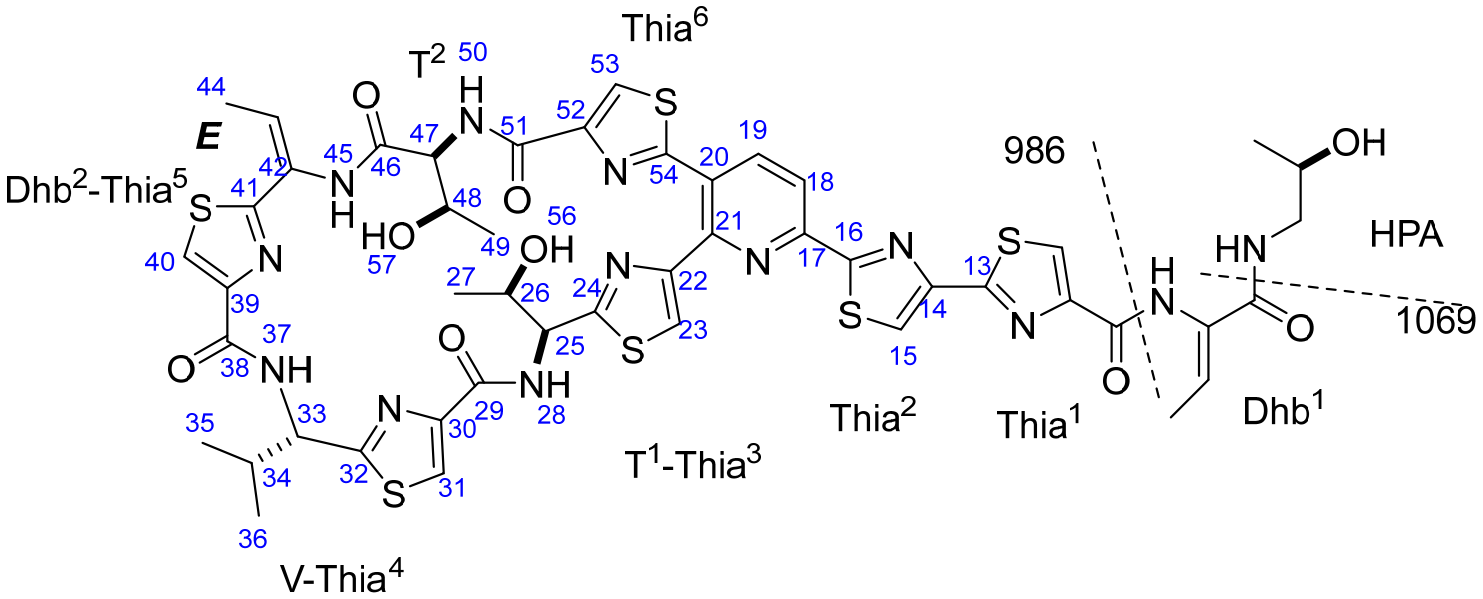

**Table S1.** Antibacterial activities (MIC μg/mL) of micrococcins P3 (**1**) and P1 (**2**) against marine-derived bacterial strains

| marine-derived bacterial strains | Code number of strains | **1** | **2** | Vancomycin | Linezolid | DMSO (v/v) |
|---|---|---|---|---|---|---|
| *Shewanella algae* | 19J07-TSA-3-1 | 8 | 8 | 3.2 | 1.6 | 6.3% |
| *Photobacterium damselae* | 19H09-Blood-2 | 8 | 8 | 3.2 | 0.8 | 6.3% |
| *Vibrio parahaemolyticus* | 19H07-MHAB-S-4 | 8 | 8 | 3.2 | 0.4 | 6.3% |
| *Enterococcus faecalis* | 19J04-blood-1-2 | 0.5 | 0.05 | 1.6 | 0.1 | 6.3% |
| *Bacillus amyloliquefaciens_ssp_plantarum* | 19H07-D-BHIB-1-2 | 4 | 0.5 | 1.6 | 1.6 | 6.3% |
| *Pseudomonas stutzeri* | 19H07-MHAB-1-2 | 4 | 4 | 0.8 | 0.8 | 6.3% |

Wells with 8 μg/mL of test compound contained 1.5% DMSO.

**Table S2.** $^{1}$H NMR (700 MHz) data of micrococcin P1 (**2**) in DMSO-$d_6$ ($J$ in Hz)

| No. | **2** | No. | **2** |
|---|---|---|---|
| 1 | 1.02, d (6.2) | 31 | 8.29, s |
| 2 | 3.71, sext (6.2) | 33 | 5.13, t (9.0) |
| 3 | 3.08, m | 34 | 2.52, m |
| 4 | 7.92, t (5.5) | 35 | 0.97, d (6.3) |
| 7 | 6.51, q (7.0) | 36 | 0.86, d (6.3) |
| 8 | 1.70, d (7.0) | 37 | 8.38, d (9.0) |
| 9 | 9.53, s | 40 | 8.20, s |
| 12 | 8.45, s | 43 | 6.46, q (6.9) |
| 15 | 8.58, s | 44 | 1.75, d (6.9) |
| 18 | 8.32, d (8.1) | 45 | 9.54, s |
| 19 | 8.44, d (8.1) | 47 | 4.69, dd (7.6, 2.9) |
| 23 | 8.10, s | 48 | 4.38, br s |
| 25 | 5.08, dd (8.4, 6.2) | 49 | 1.38, d (6.0) |
| 26 | 4.01, t (6.2) | 50 | 7.86, d (7.6) |
| 27 | 1.03, d (6.2) | 53 | 8.36, s |
| 28 | 8.23, d (8.4) | | |

**Table S3.** $^{13}$C NMR (175 MHz) data of micrococcin P1 (**2**) in DMSO-$d_6$ ($J$ in Hz)

| No. | **2** | No. | **2** |
|---|---|---|---|
| 1 | 21.1 | 27 | 20.7 |
| 2 | 65.2 | 29 | 160.6 |
| 3 | 46.9 | 30 | 149.2 |
| 5 | 164.5 | 31 | 124.9 |
| 6 | 130.7 | 32 | 170.0 |
| 7 | 128.2 | 33 | 55.6 |
| 8 | 13.7 | 34 | 32.4 |
| 10 | 159.2 | 35 | 18.6 |
| 11 | 150.5 | 36 | 19.7 |
| 12 | 125.6 | 38 | 159.9 |
| 13 | 161.5 | 39 | 148.3 |
| 14 | 149.5 | 40 | 124.5 |
| 15 | 121.8 | 41 | 166.4 |
| 16 | 168.4 | 42 | 130.0 |
| 17 | 149.8 | 43 | 128.8 |
| 18 | 118.7 | 44 | 13.9 |
| 19 | 140.8 | 46 | 168.7 |
| 20 | 128.7 | 47 | 57.7 |
| 21 | 151.1 | 48 | 67.6 |
| 22 | 152.6 | 49 | 20.0 |
| 23 | 121.5 | 51 | 159.9 |
| 24 | 170.1 | 52 | 149.7 |
| 25 | 56.1 | 53 | 126.1 |
| 26 | 67.2 | 54 | 164.2 |