



FIG. S2. Two-dimensional NMR analysis of signermycin B. Analysis of the ^1H - ^1H correlation spectroscopy of signermycin B revealed the five partial structures drawn with bold lines: from methyl proton at δ 0.79 (H14) to 1.00, 1.30 (H13), 1.17, 1.47 (H12), 2.59 (H11), 3.94 (H2), 2.48 (H3) (the proton of which branched to 1.36 (H4) and to 2.08 (H8), and 1.24), 1.74 (H7); from δ 0.95 (H16) to 0.94, 1.72 (H15); from δ 1.09 (H17) to 1.36 (H6); from δ 1.38 (H6') to 3.90 (H5'), and 5.93 (H1'); and long-range coupling from δ 1.60 (H18) to 5.55 (H9). The connectivities of these partial structures were determined by heteronuclear multiple bond correlation (HMBC). The long-range ^1H - ^{13}C couplings from δ 1.60 to δ 133.6 (C10), 43.9 (C11), and 128.4 (C9), from the methine proton at δ 2.08 to δ 128.4, 133.6, and 41.1, from the methyl proton at δ 1.09 to δ 37.5 (C7), 41.1, and 75.7 (C5), from the oxymethine at δ 3.17 (H5) to δ 52.0 (C4), 21.5 (C15), and 39.5 (C3), and from the methyl proton at δ 0.95 to δ 21.5 (C16), and 52.0 revealed the decalin ring structure. The tetramic acid moiety described above was further determined by HMBC, from the methyl proton at δ 1.38 to δ 57.7 (C6') and 195.2 (C5'), from the nitrogen-bearing methine proton at δ 3.90 (δ 57.7, C5') to δ 174.9 (C2'), and 195.2, and from the NH proton at δ 5.93 to δ 102.5 (C3'). Finally, the long-range connections from the methine proton at δ 3.94 to δ 193.3 (C1) and 102.5 revealed the connectivity of a tetramic acid moiety and attached to C2 of the decalin ring. The planar structure of signermycin B was elucidated as shown in Fig. 1.