

Supplementary information for

Krisynomycins, Imipenem Potentiators against Methicillin-Resistant *Staphylococcus aureus*, Produced by *Streptomyces canus*

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Page	Contents
4	Figure S1. ^1H - ^1H COSY and key HMBC correlations for compound 2 .
4	Figure S2. ^1H - ^1H COSY and key HMBC correlations for compound 3 .
5	Figure S3. Chromatographic profile of the standard amino acids/D-FDVA.
5	Figure S4. Chromatographic profile of the amino acids from the compound 1 /D-FDVA.
6	Figure S5. Chromatographic profile of the standard amino acids/L-FDVA.
6	Figure S6. Chromatographic profile of the amino acids from the compound 1 /L-FDVA.
7	Table S7. Deduced functions of the ORFs in the krisynomycins biosynthetic gene cluster.
7	Figure S8. Possible pathways leading to 7-chloro-L-tryptophan, 7-chloro-4-prenyl-L-tryptophan and 4-prenyl-L-tryptophan.
8	Figure S9. Phylogenetic tree of the strain CA-091830, based on the Neighbor-Joining method and Jukes and Cantor algorithm.
9	Figure S10. ^1H -NMR (500 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin B (1).
10	Figure S11. HSQC (dimethyl sulfoxide- d_6) spectrum of krisynomycin B (1).
11	Figure S12. HMBC (dimethyl sulfoxide- d_6) spectrum of krisynomycin B (1).
12	Figure S13. COSY (dimethyl sulfoxide- d_6) spectrum of krisynomycin B (1).
13	Figure S14. TOCSY (dimethyl sulfoxide- d_6) spectrum of krisynomycin B (1).
14	Figure S15. ^1H -NMR (500 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin C (2).
15	Figure S16. ^{13}C -NMR (125 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin C (2).

- 16 **Figure S17.** HSQC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).
17 **Figure S18.** HMBC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).
18 **Figure S19.** COSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).
19 **Figure S20.** TOCSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).
20 **Figure S21.** ¹H-NMR (500 MHz, dimethyl sulfoxide-*d*₆) spectrum of
krisynomycin (**3**).
21 **Figure S22.** ¹³C-NMR (125 MHz, dimethyl sulfoxide-*d*₆) spectrum of
krisynomycin (**3**).
22 **Figure S23.** HSQC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).
23 **Figure S24.** HMBC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).
24 **Figure S25.** COSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).
25 **Figure S26.** TOCSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).
26 **Figure S27.** Comparison of the theoretical and experimental isotopic
distribution of krisynomycin C (**2**).
26 **Figure S28.** Comparison of the theoretical and experimental isotopic
distribution of krisynomycin (**3**).
27 **Figure S29.** Antibacterial activity against MRSA of krisynomycins and
krisynomycins with 4 µg/mL of imipenem.

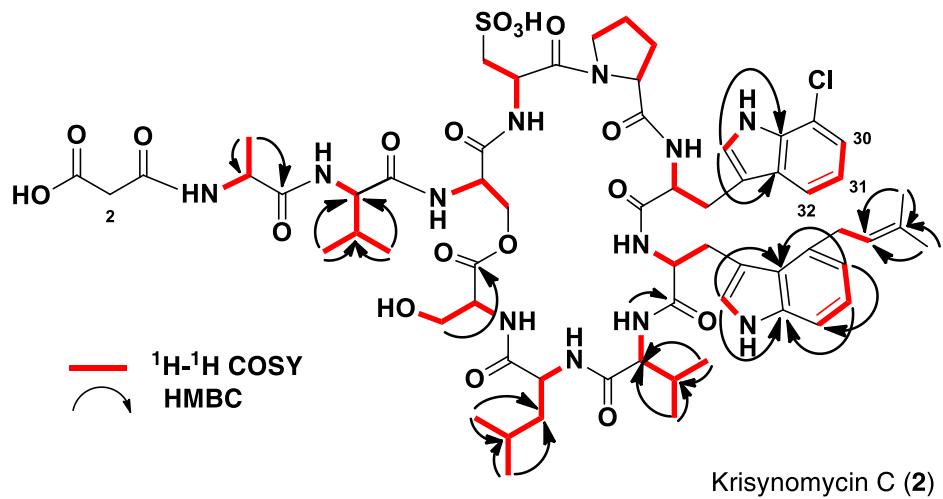


Figure S1. $^1\text{H}-^1\text{H}$ COSY and key HMBC correlations for compound 2.

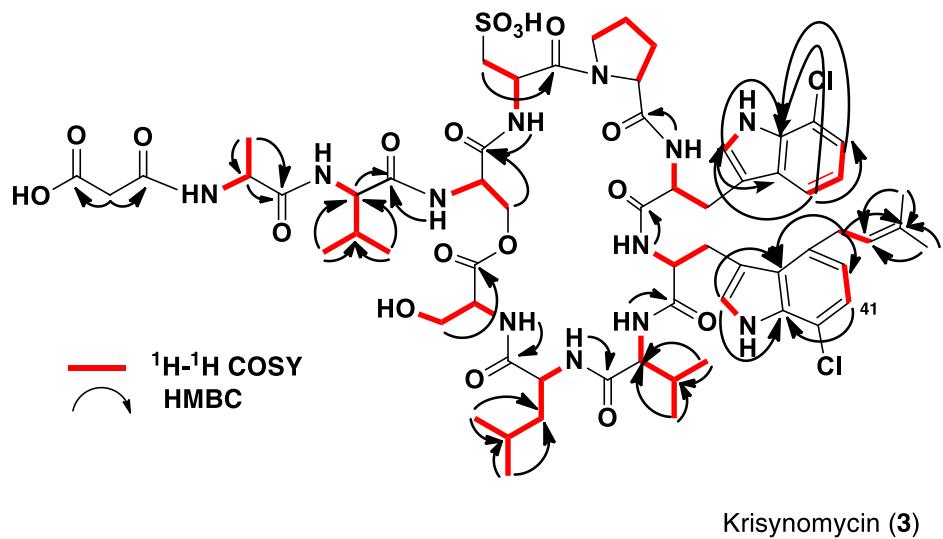


Figure S2. $^1\text{H}-^1\text{H}$ COSY and key HMBC correlations for compound 3.

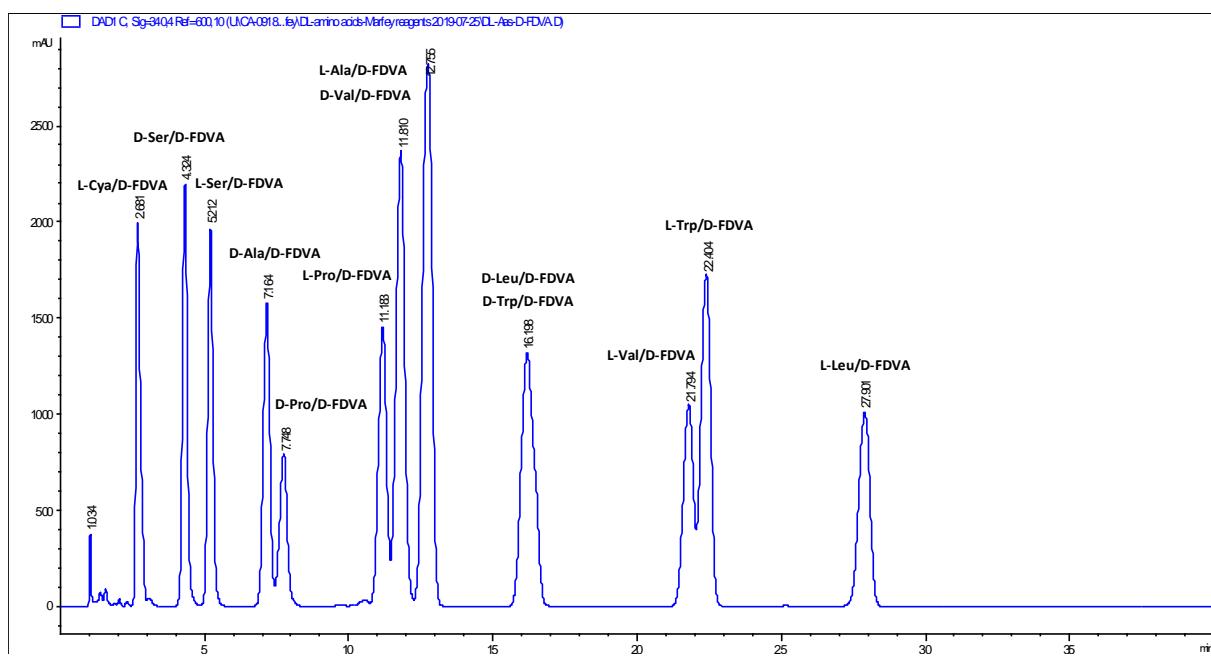


Figure S3. Chromatographic profile of the standard amino acids/D-FDVA.

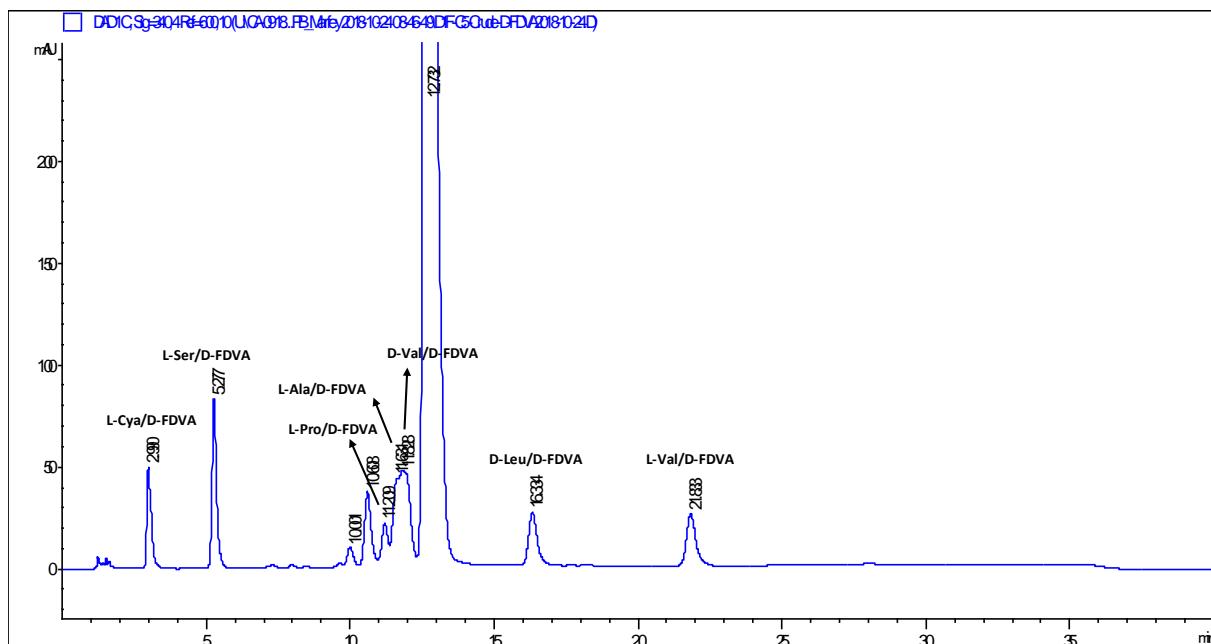


Figure S4. Chromatographic profile of the amino acids from the compound **1**/D-FDVA.

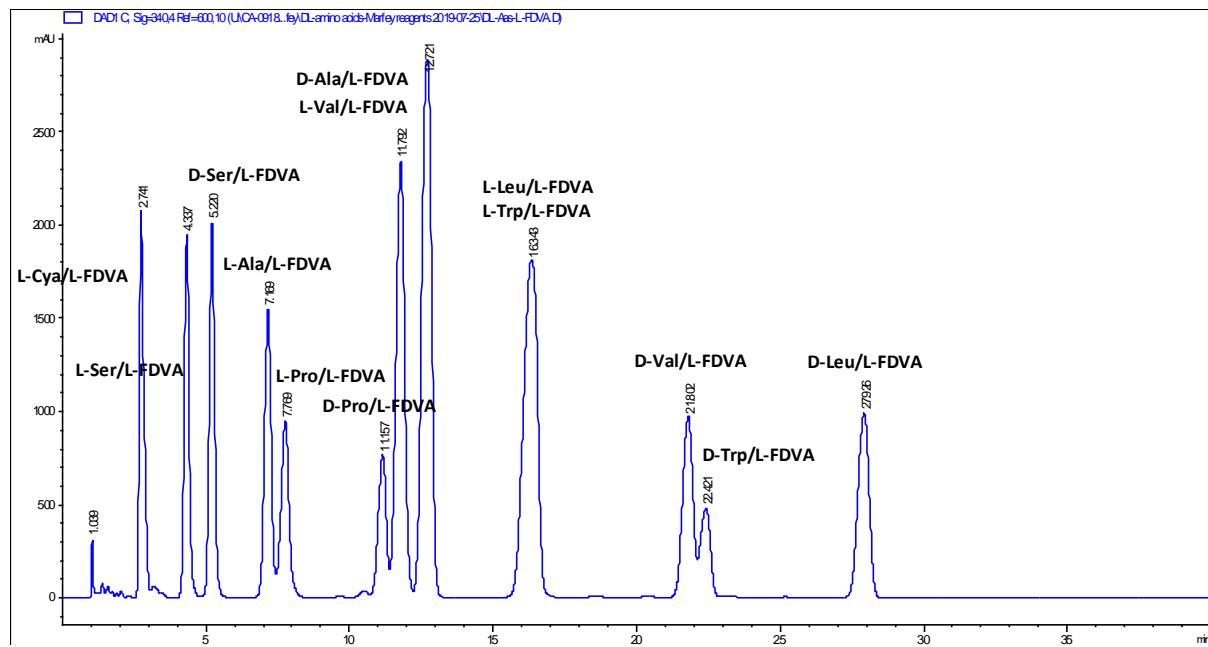


Figure S5. Chromatographic profile of the standard amino acids/L-FDVA.

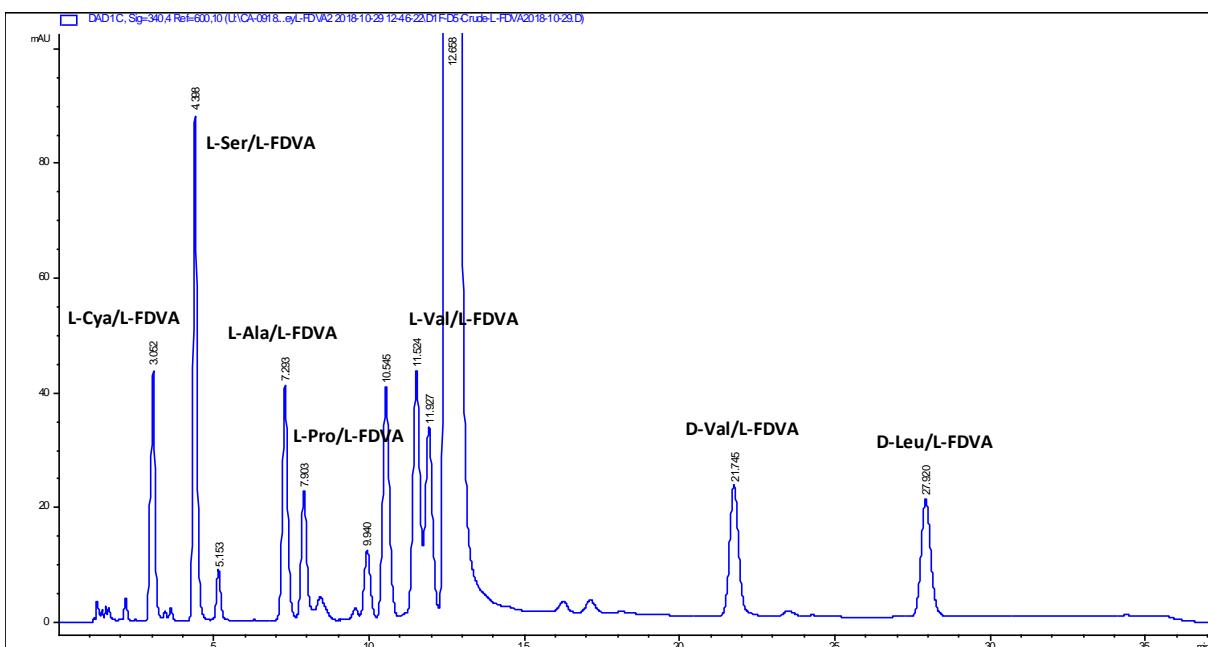


Figure S6. Chromatographic profile of the amino acids from the compound **1**/L-FDVA.

Table S7. Deduced functions of the ORFs in the krisynomycins biosynthetic gene cluster.

CDS	aa lenght	Putative function	Closest homologue	Identity	Similarity
<i>kriA</i>	219	Hypothetical protein	WP_107021694.1	80%	89%
<i>kriB</i>	290	ABC transporter	WP_059006021.1	85%	89%
<i>kriC</i>	428	Cysteate synthase	WP_079031766.1	82%	86%
<i>kriD</i>	78	MbtH-family protein	WP_059006019.1	93%	96%
<i>kriE</i>	530	Tryptophan 7-halogenase	WP_133906985.1	80%	89%
<i>kriF</i>	9051	NRPS protein	WP_133909530.1	66%	75%
<i>kriG</i>	2829	NRPS protein	WP_107019222.1	73%	81%
<i>kriH</i>	370	Aromatic prenyltransferase	WP_107019221.1	83%	90%
<i>kril</i>	433	Sodium / proton exchanger	WP_148014269.1	71%	80%
<i>kriJ</i>	317	Ribose-phosphate diphosphokinase	WP_123993612.1	99%	100%
<i>kriK</i>	126	Transcriptional regulator	WP_020117116.1	77%	80%
<i>kriL</i>	145	Transcriptional regulator	WP_057612947.1	99%	99%

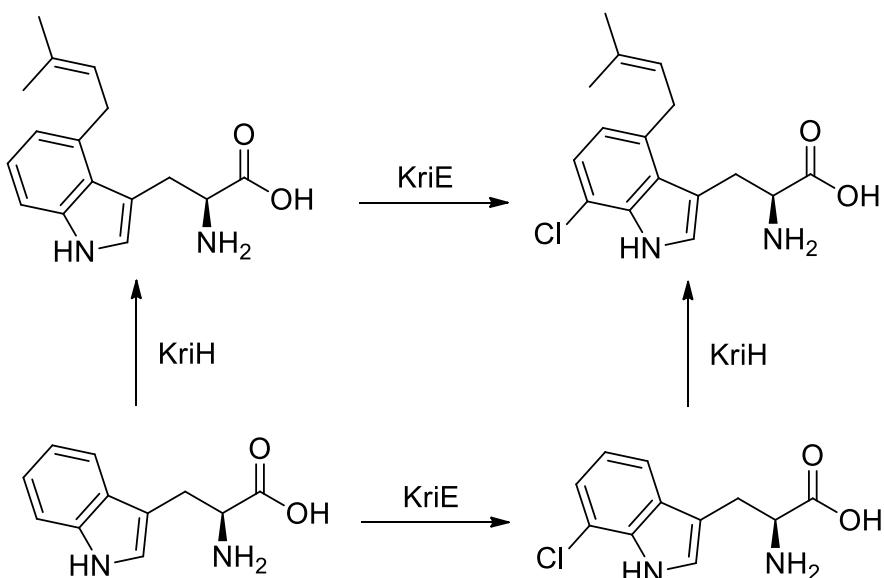


Figure S8. Possible pathways leading to 7-chloro-L-tryptophan, 7-chloro-4-prenyl-L-tryptophan and 4-prenyl-L-tryptophan.

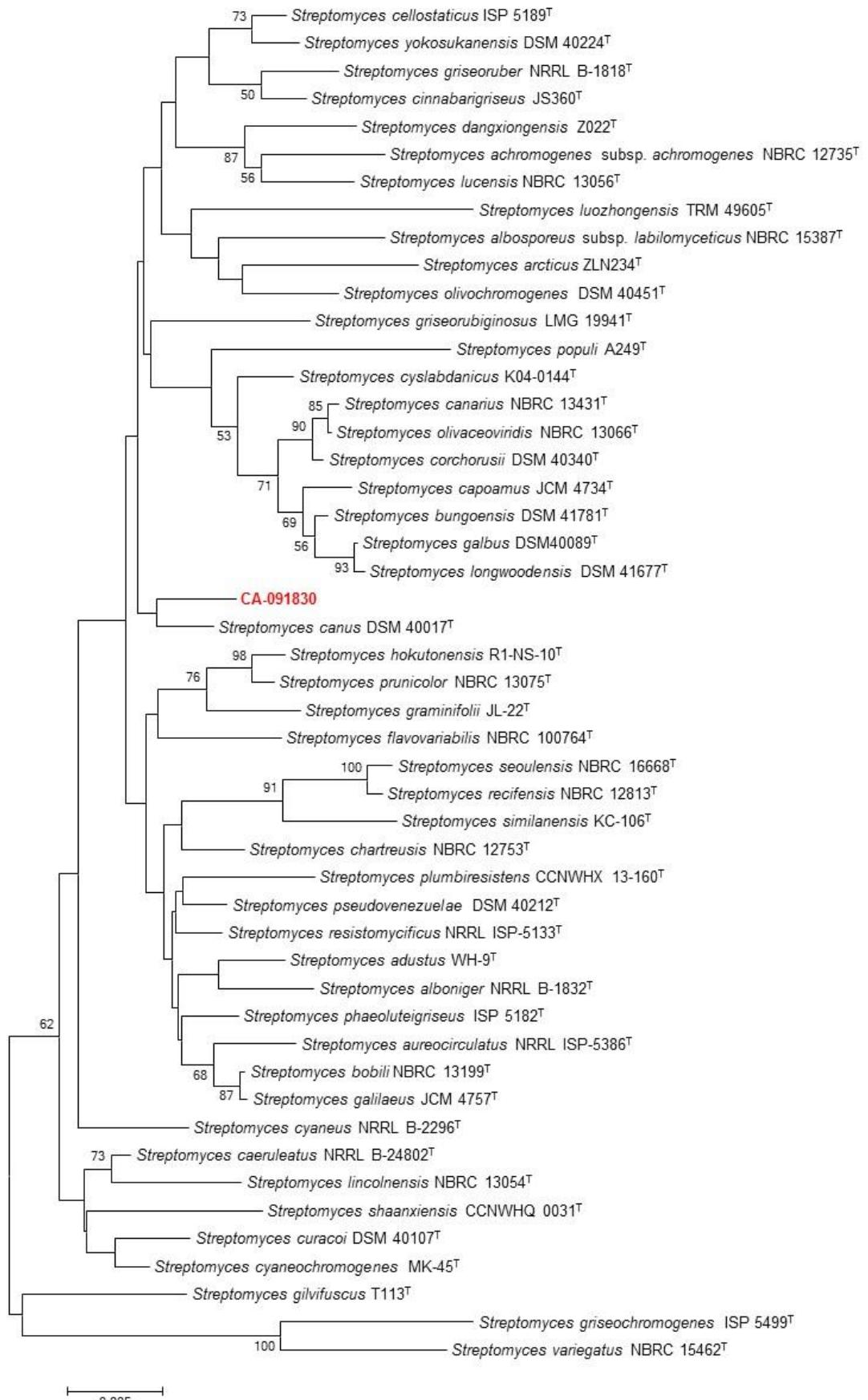


Figure S9. Phylogenetic tree of the strain CA-091830, based on the Neighbor-Joining method and Jukes and Cantor algorithm.

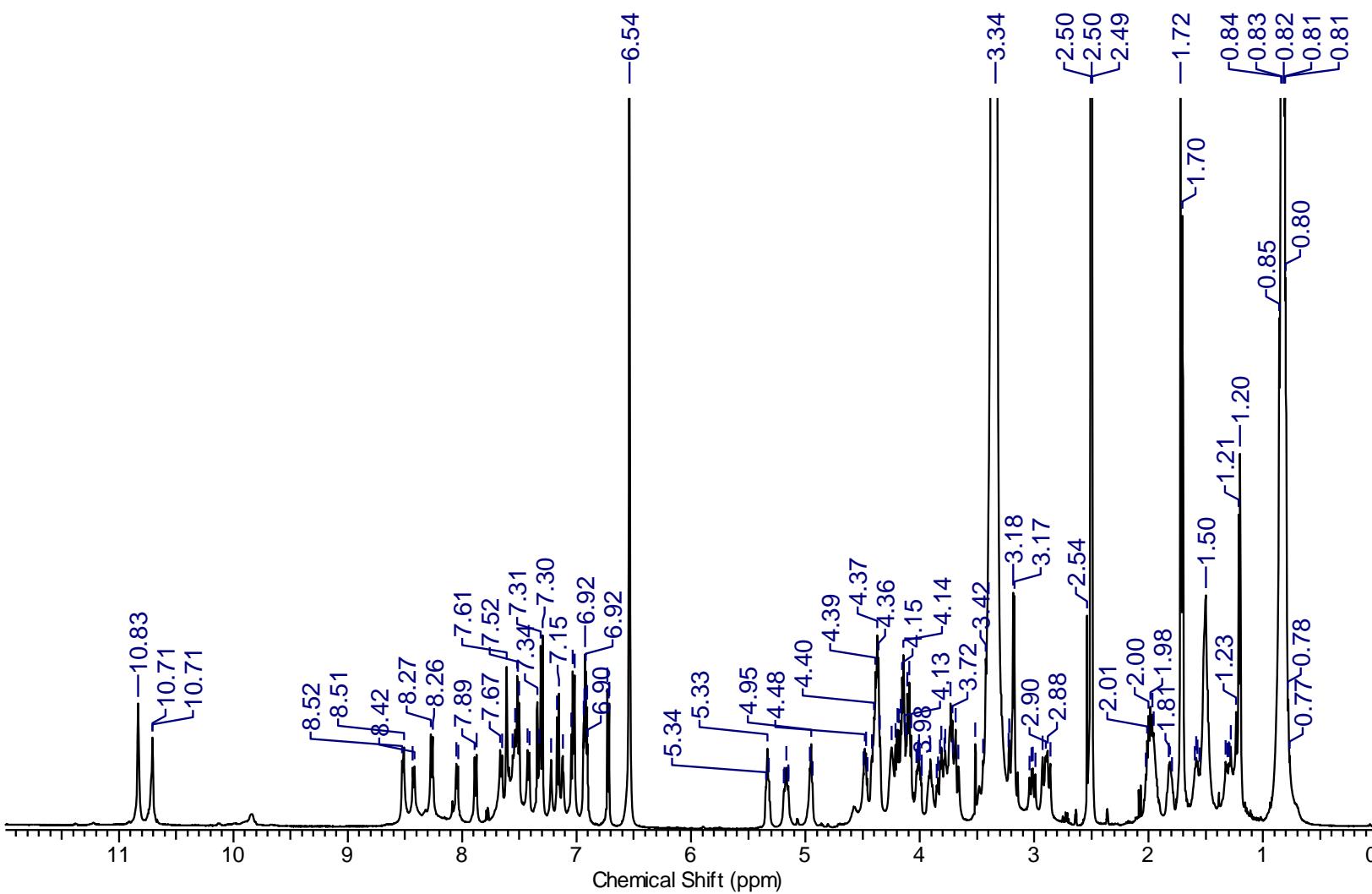


Figure S10. ${}^1\text{H}$ -NMR (500 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin B (1).

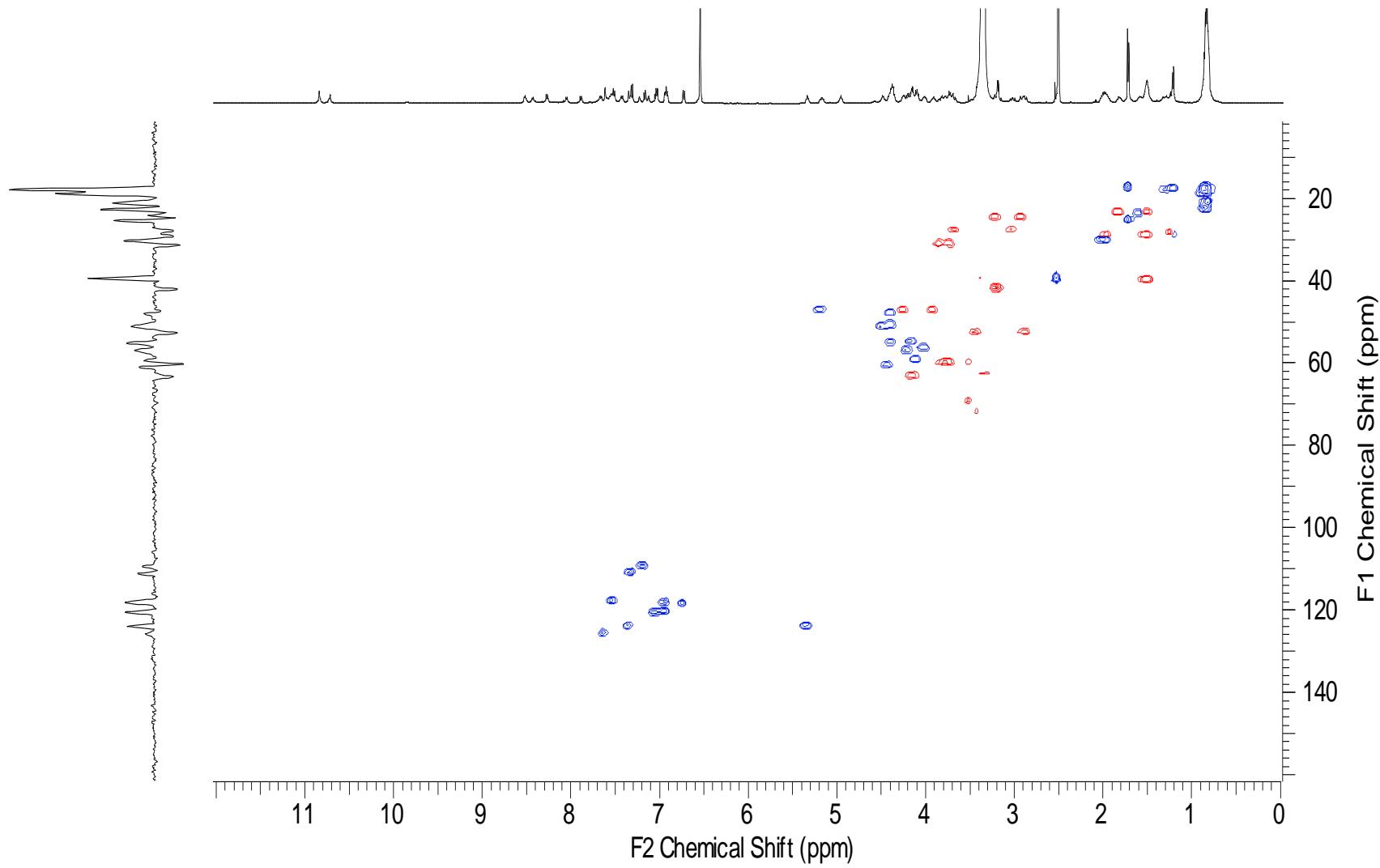


Figure S11. HSQC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin B (**1**).

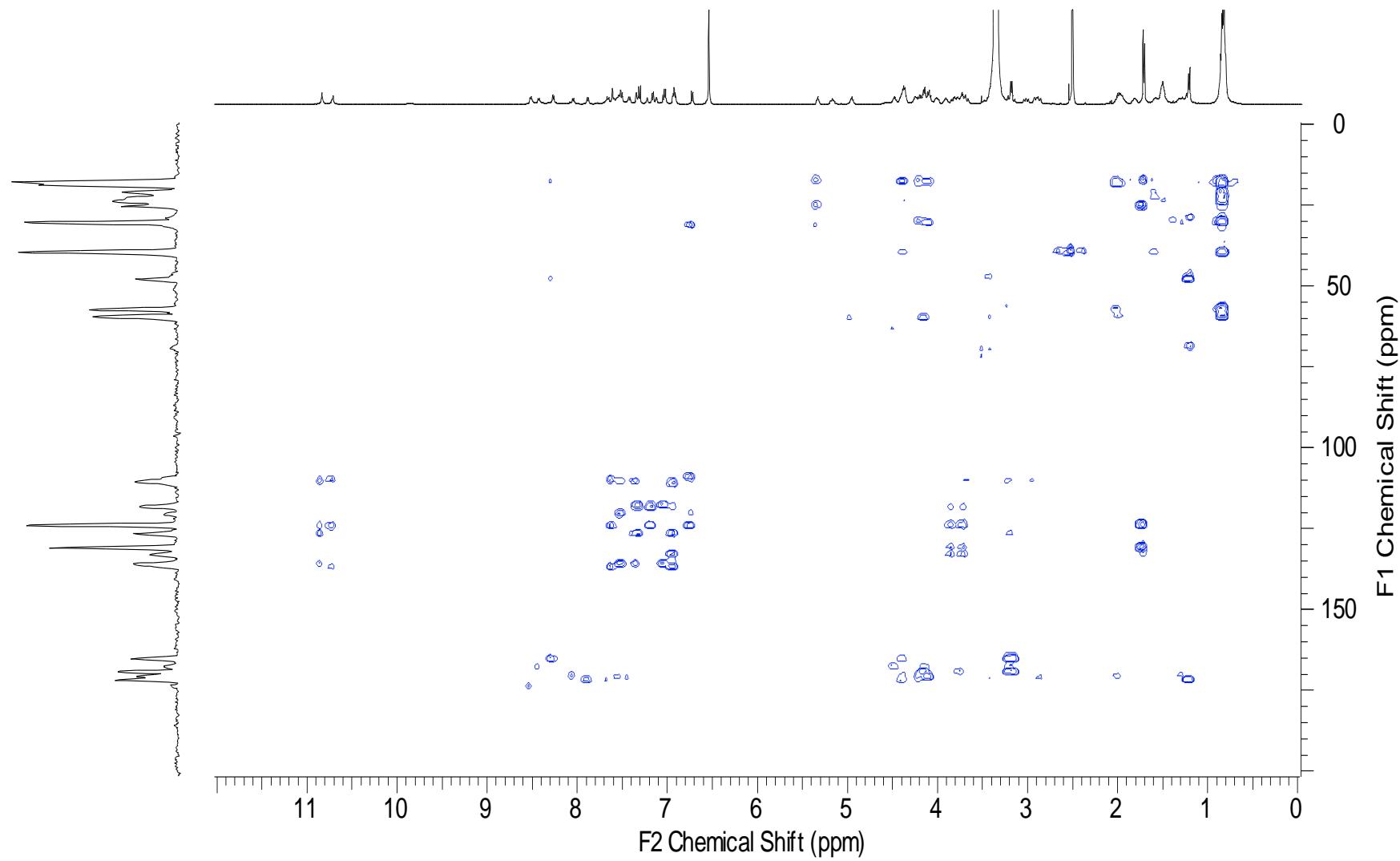


Figure S12. HMBC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin B (**1**).

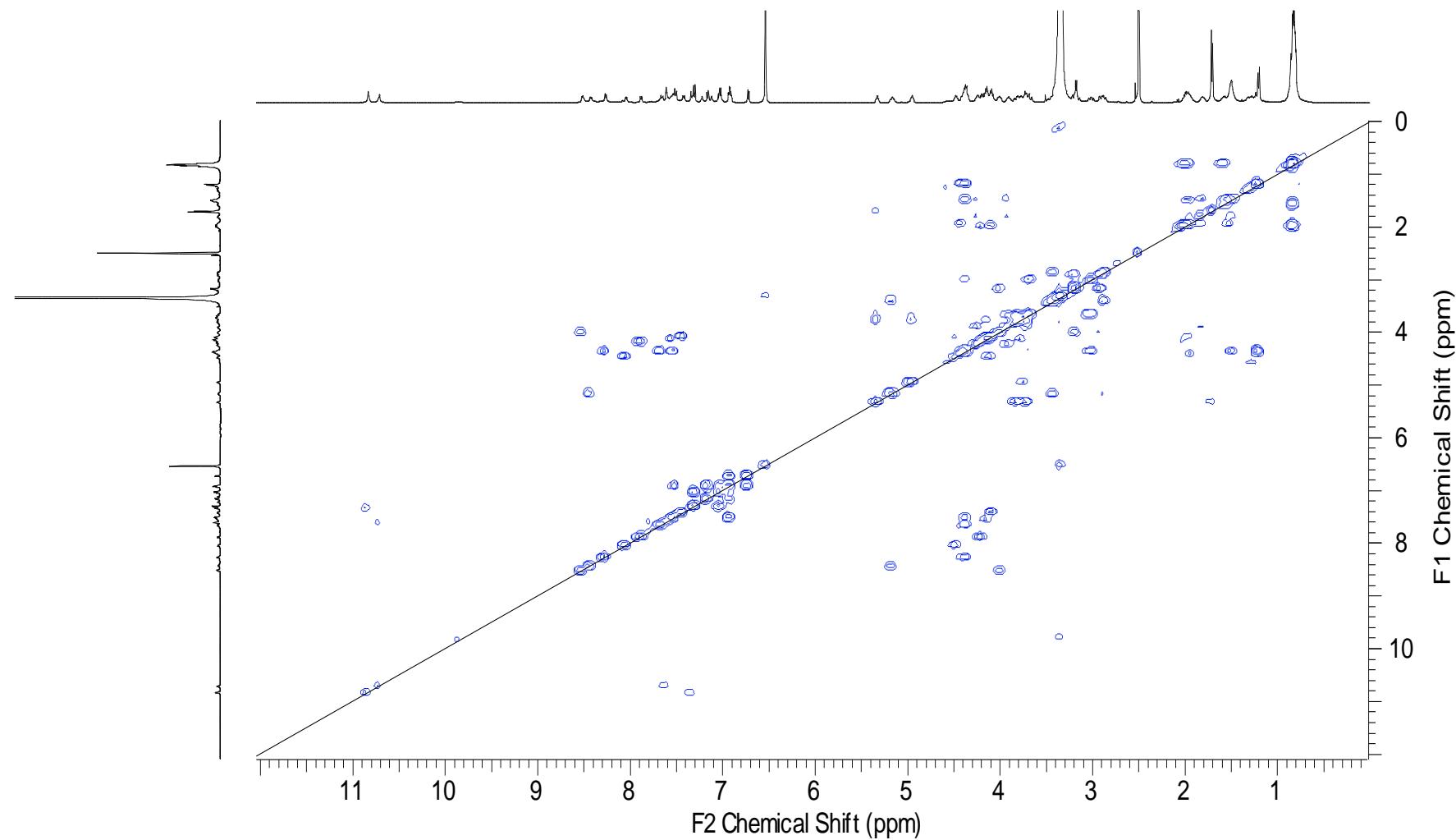


Figure S13. COSY (dimethyl sulfoxide- d_6) spectrum of krisynomycin B (**1**).

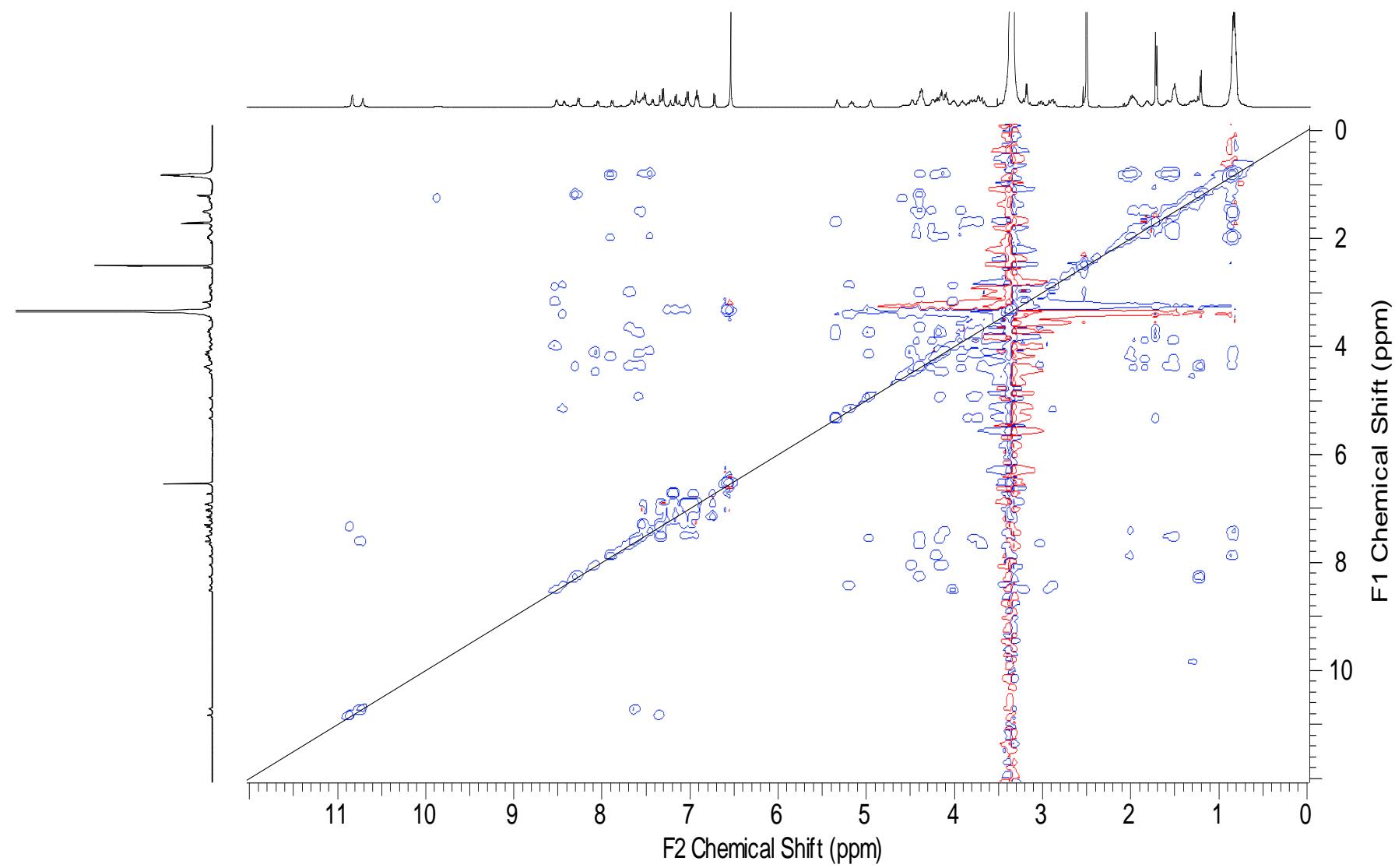


Figure S14. TOCSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin B (**1**).

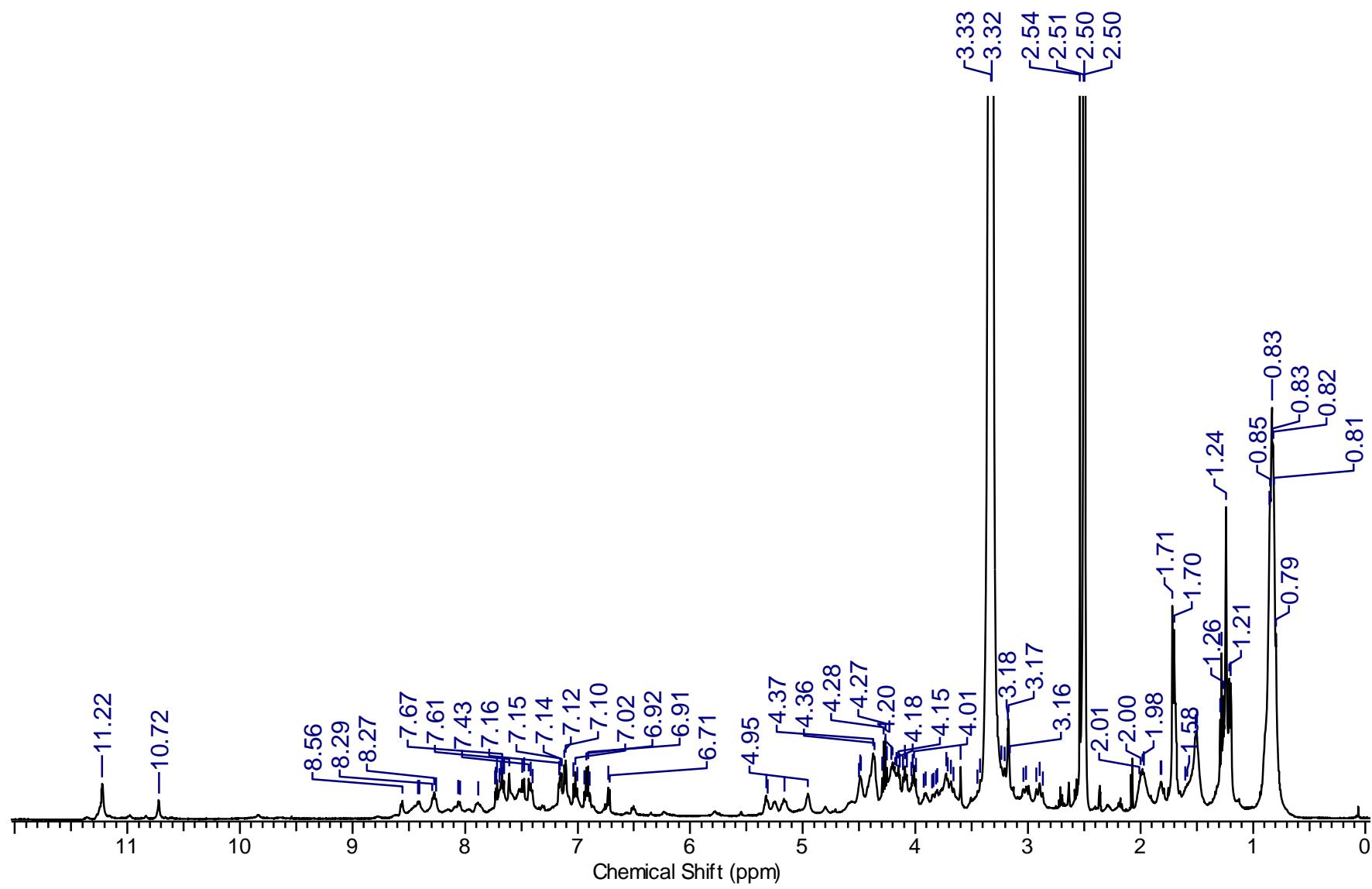


Figure S15. ${}^1\text{H}$ -NMR (500 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin C (**2**).

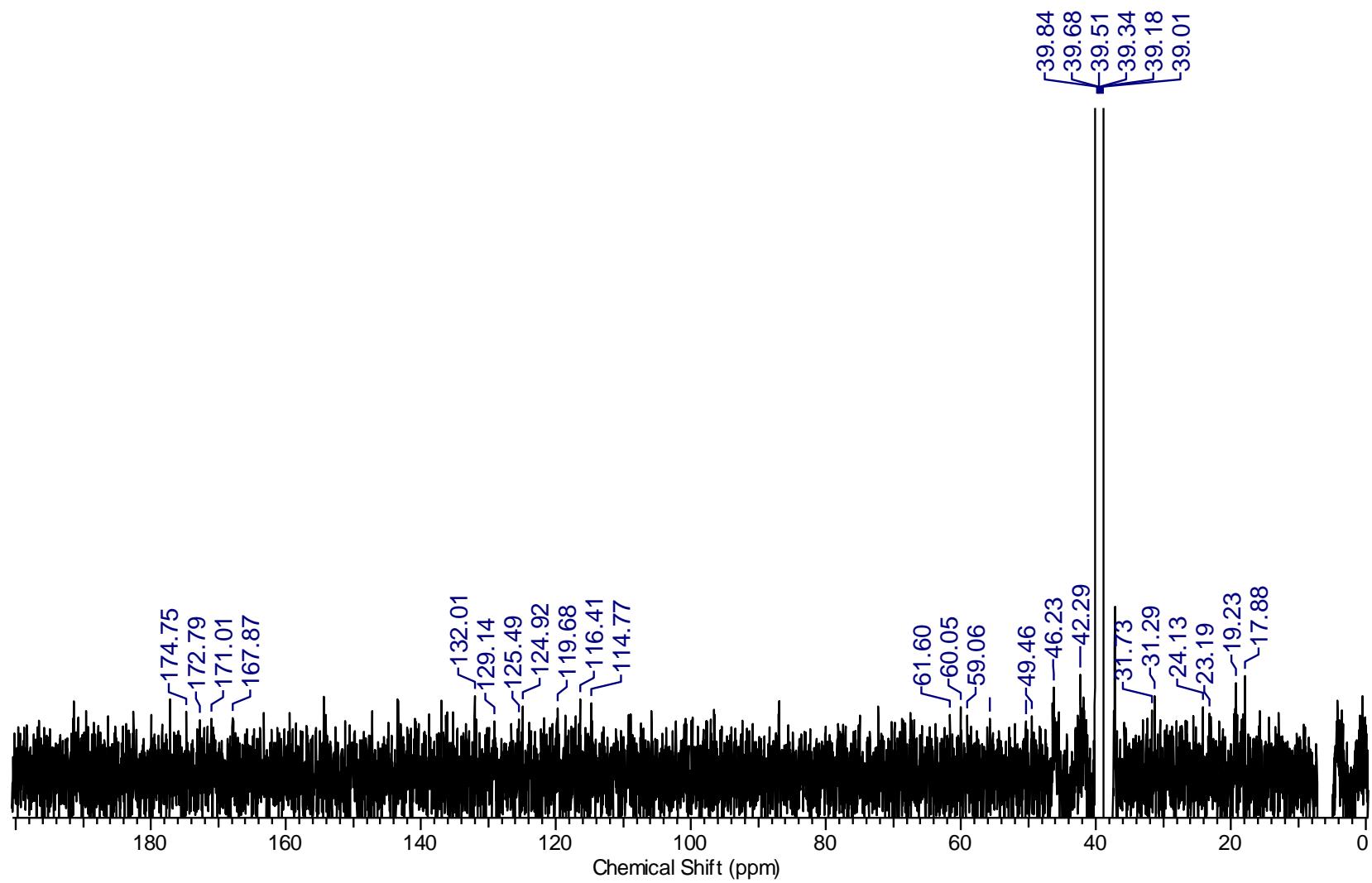


Figure S16. ¹³C-NMR (125 MHz, dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).

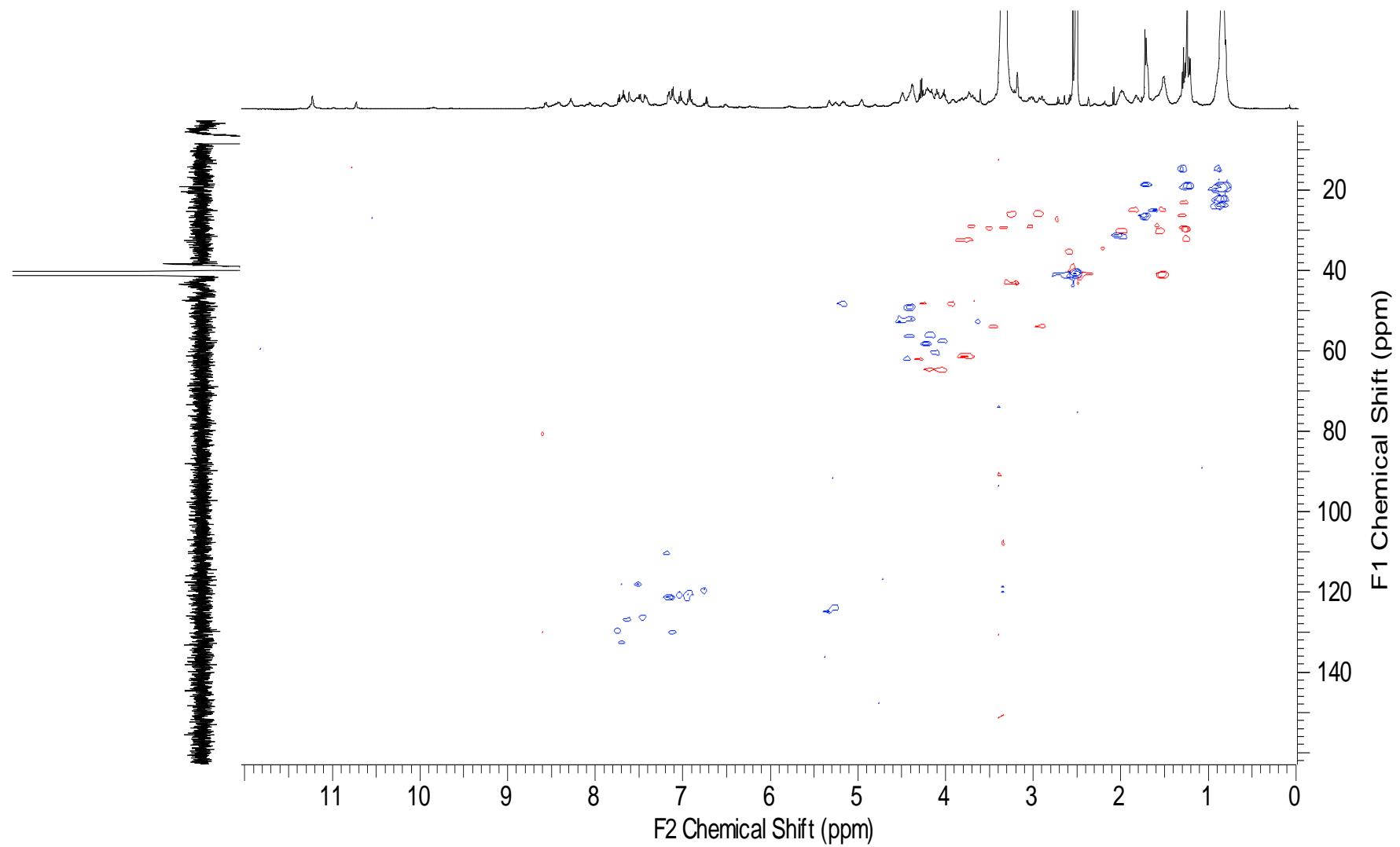


Figure S17. HSQC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).

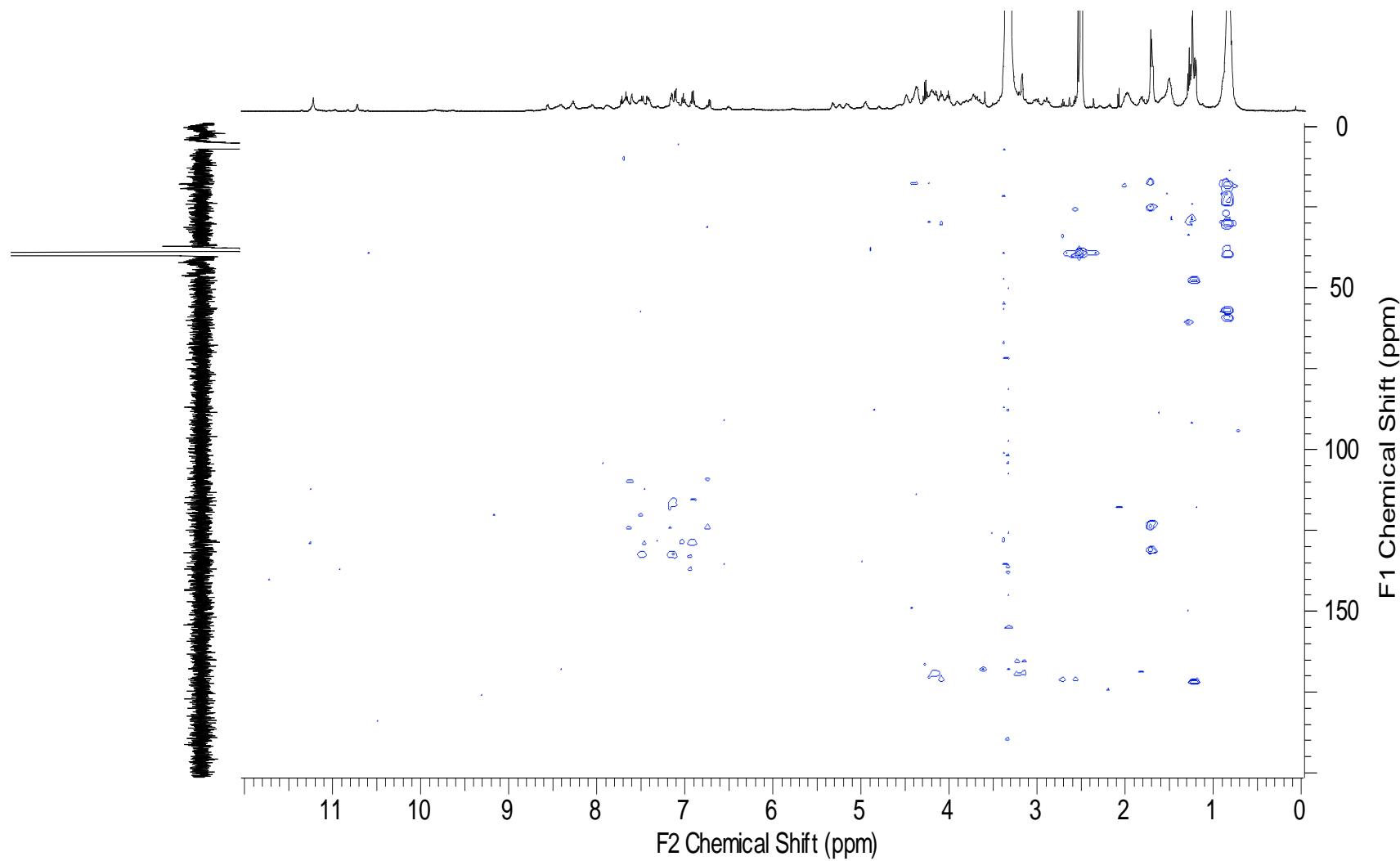


Figure S18. HMBC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).

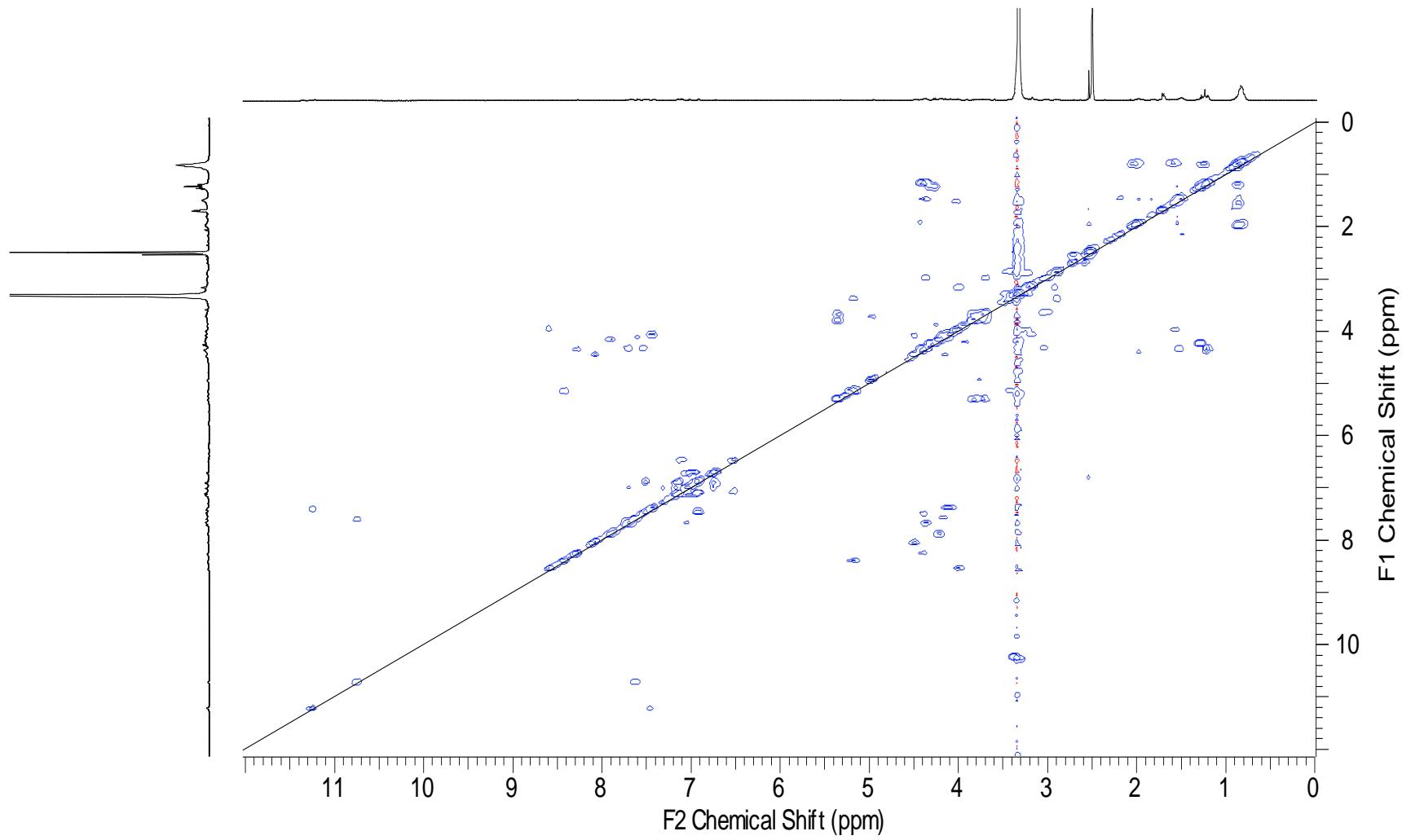


Figure S19. COSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin C (**2**).

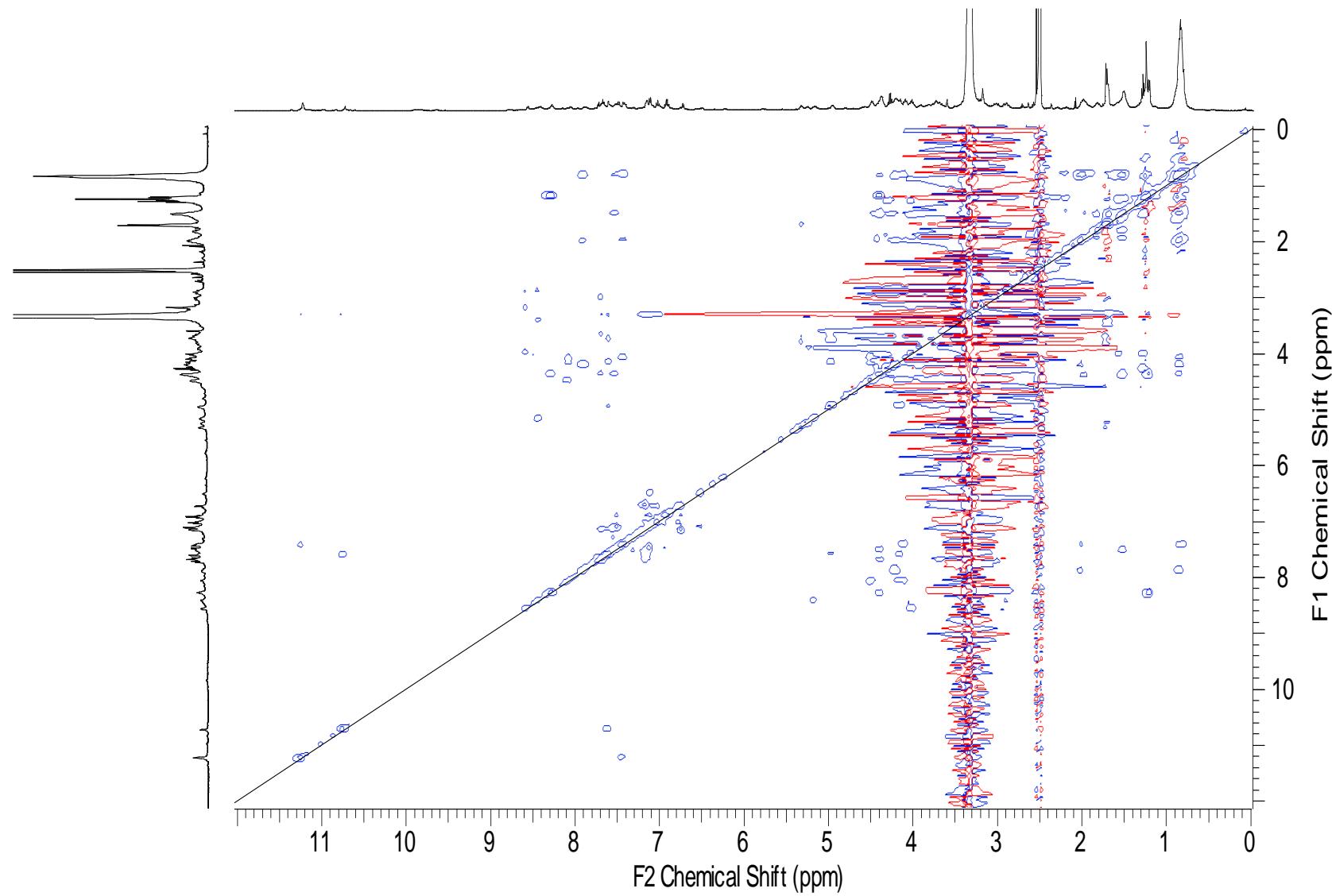


Figure S20. TOCSY (dimethyl sulfoxide- d_6) spectrum of krisynomycin C (2).

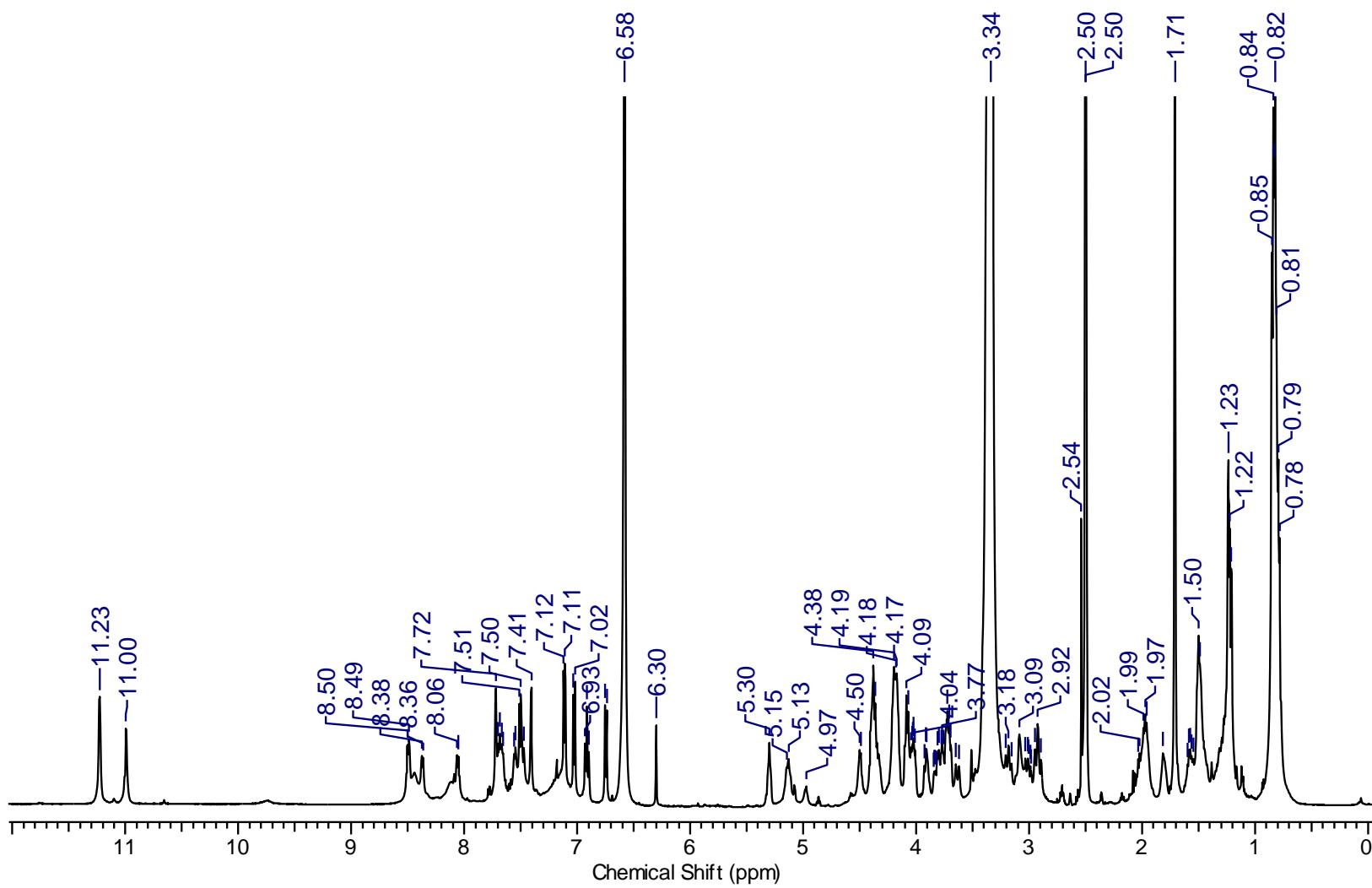


Figure S21. ${}^1\text{H}$ -NMR (500 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin (**3**).

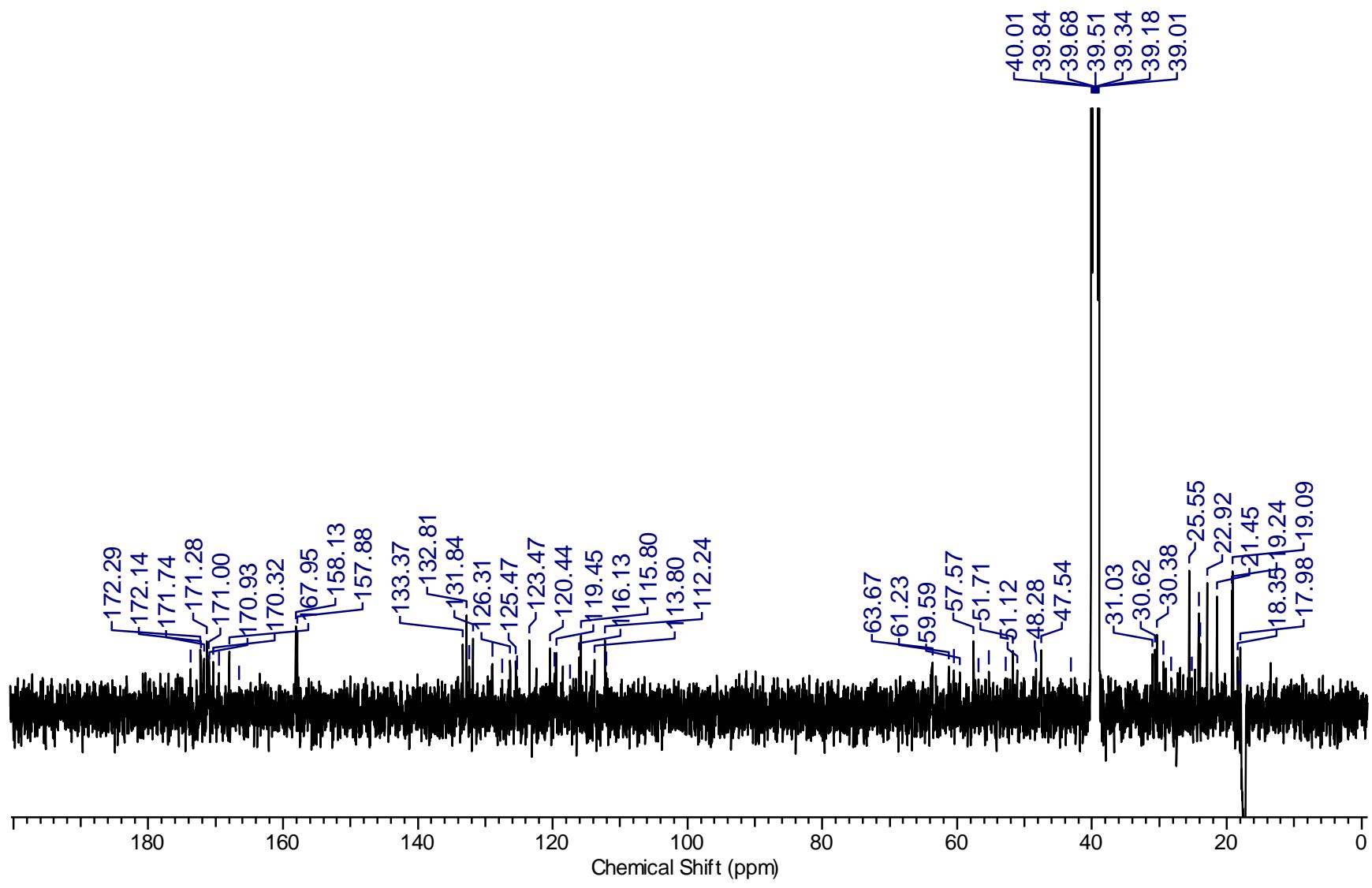


Figure S22. ^{13}C -NMR (125 MHz, dimethyl sulfoxide- d_6) spectrum of krisynomycin (**3**).

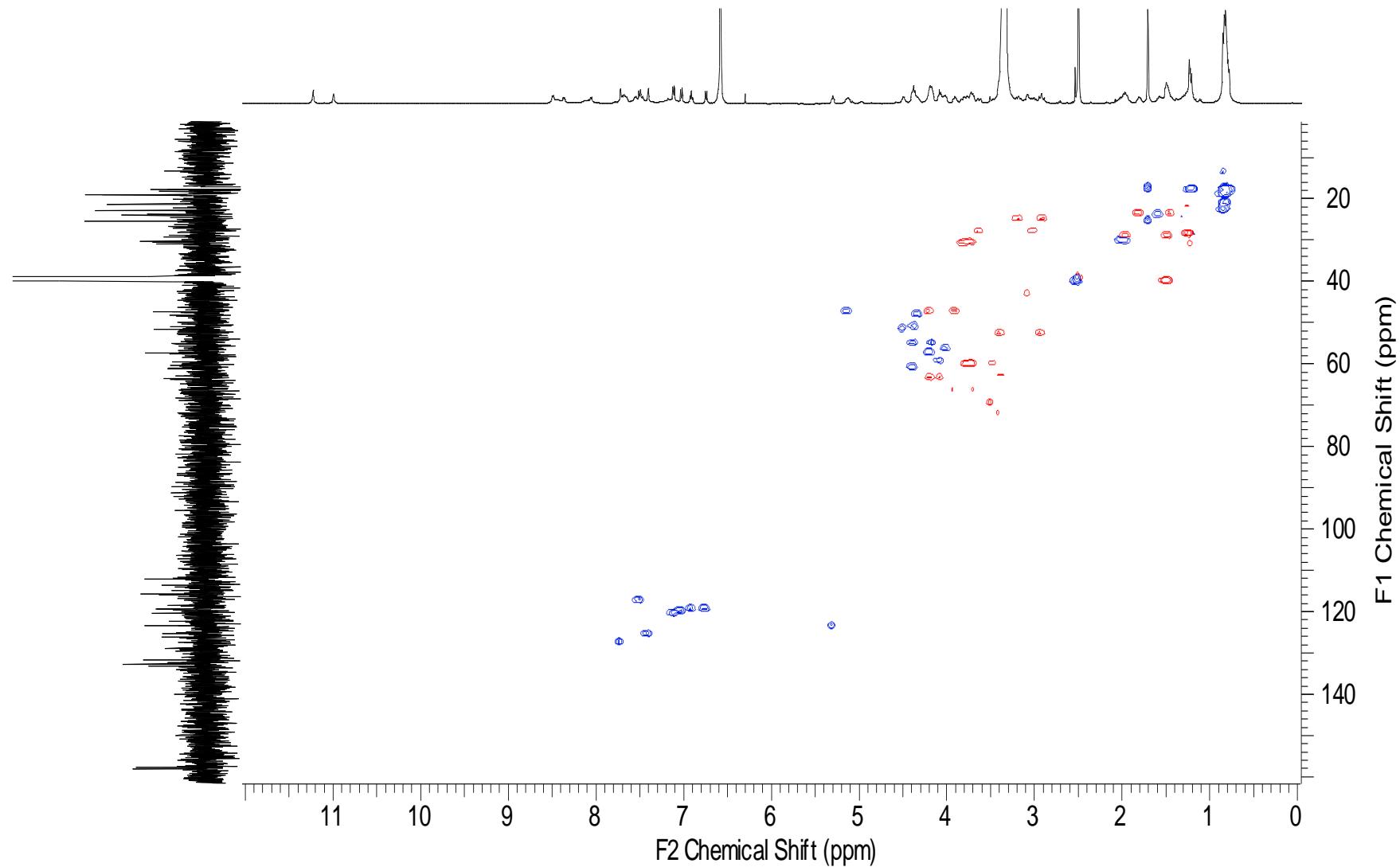


Figure S23. HSQC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).

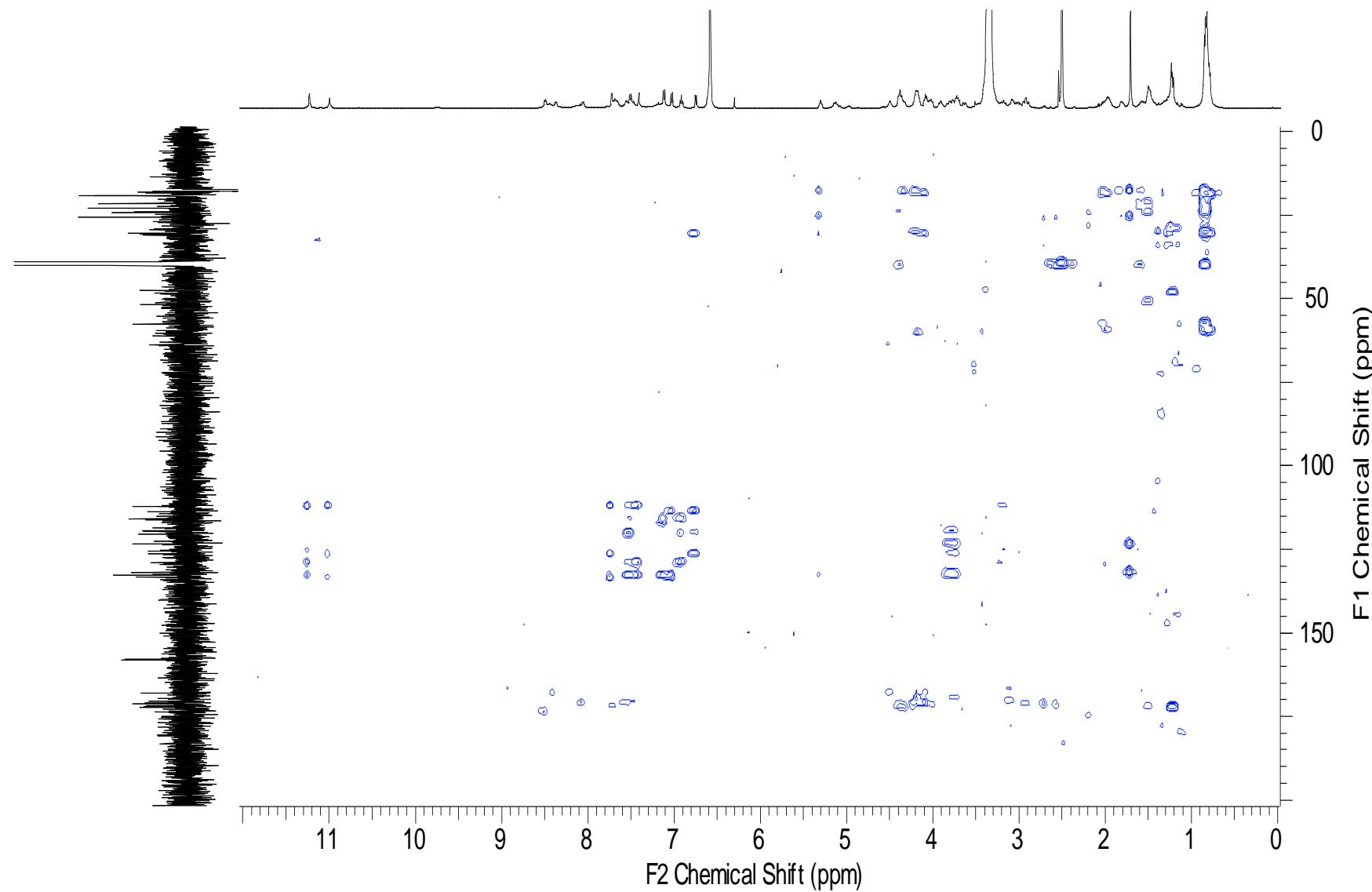


Figure S24. HMBC (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).

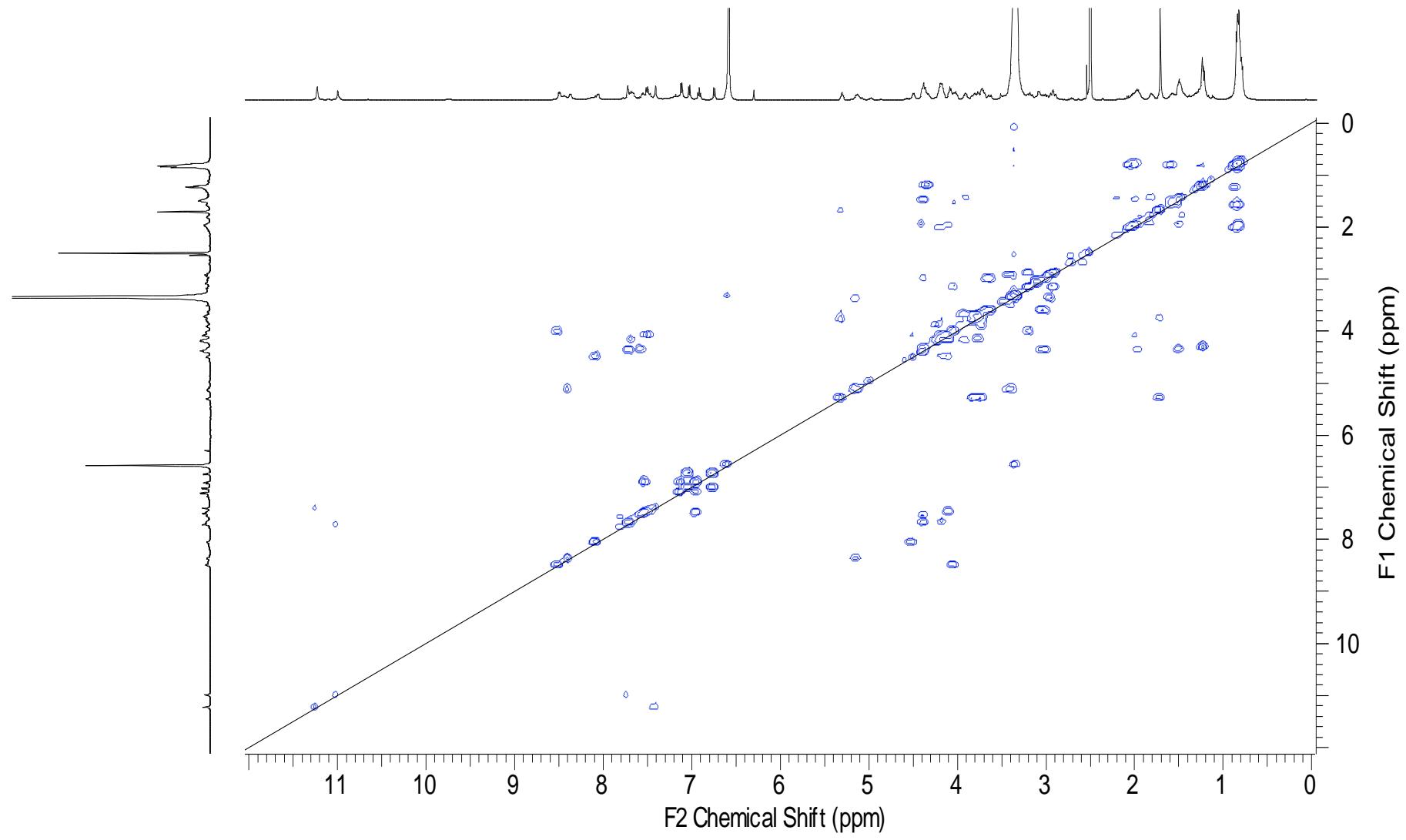


Figure S25. COSY (dimethyl sulfoxide-*d*₆) spectrum of krisynomycin (**3**).

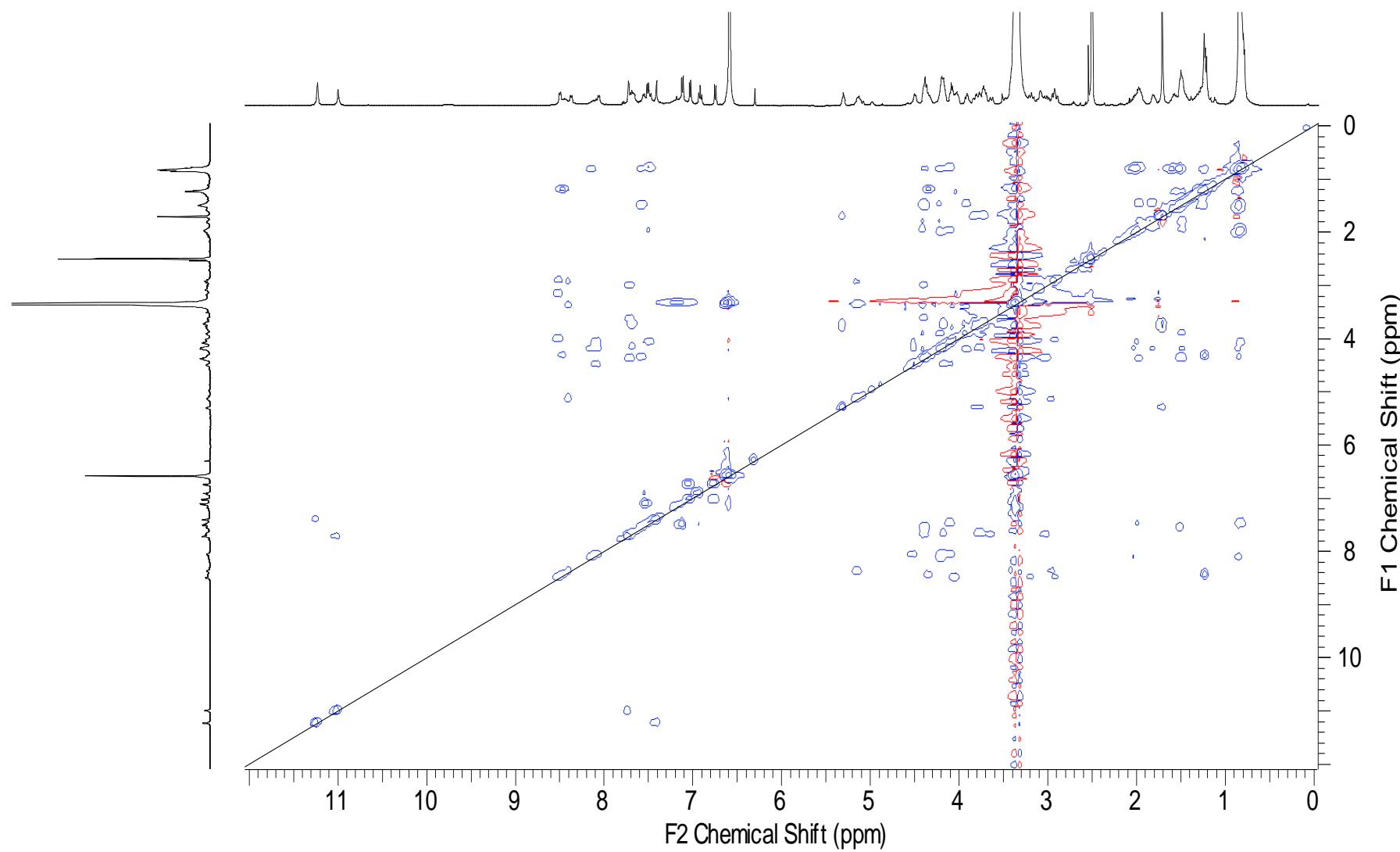


Figure S26. TOCSY (dimethyl sulfoxide- d_6) spectrum of krisynomycin (**3**).

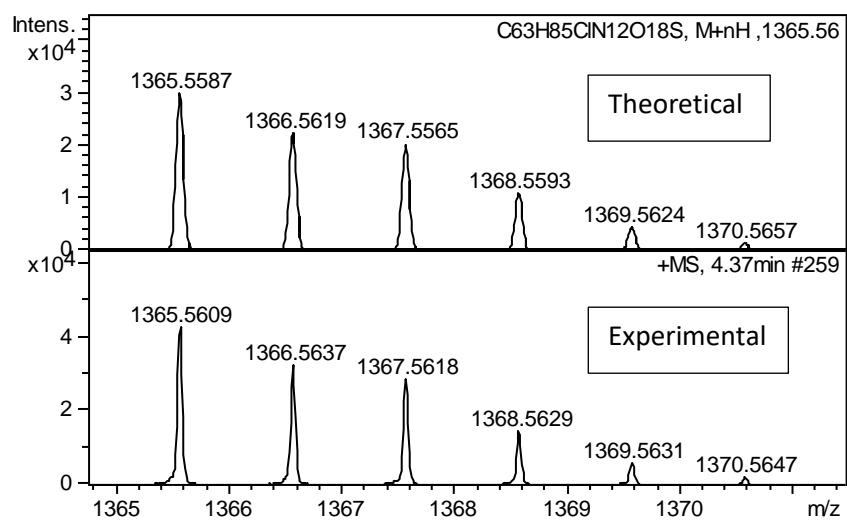


Figure S27. Comparison of the theoretical and experimental isotopic distribution of krisynomycin C (**2**).

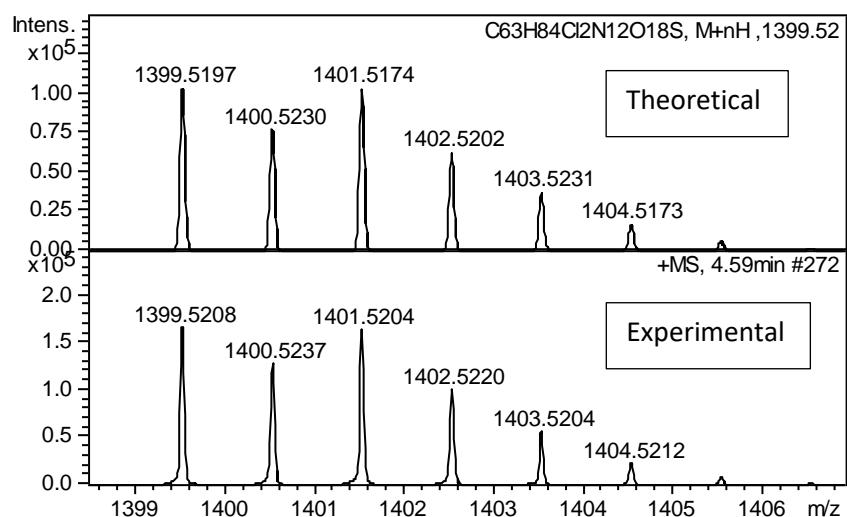


Figure S28. Comparison of the theoretical and experimental isotopic distribution of krisynomycin (**3**).

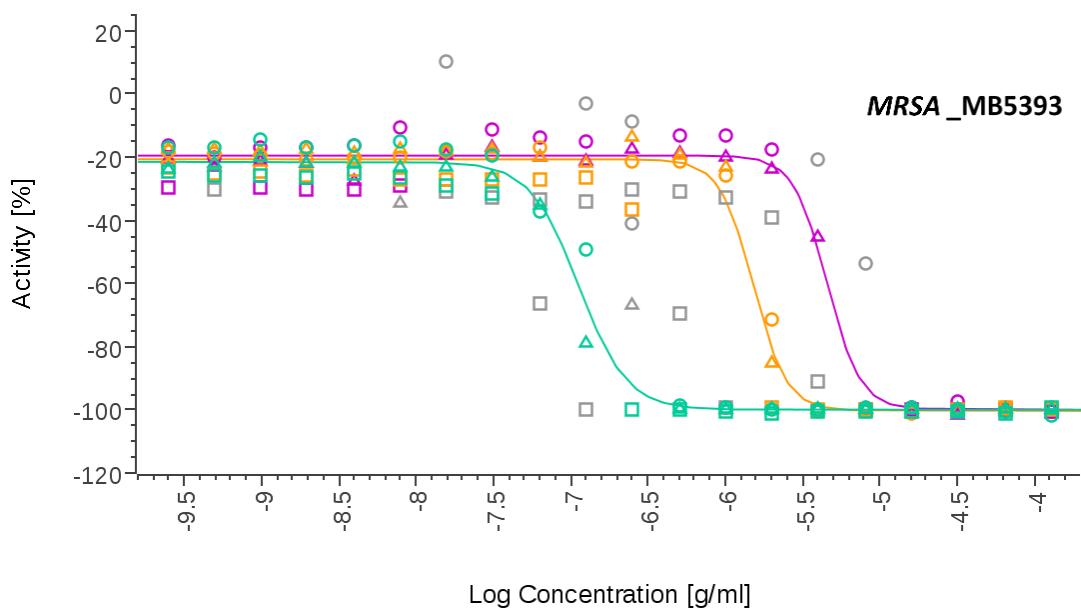
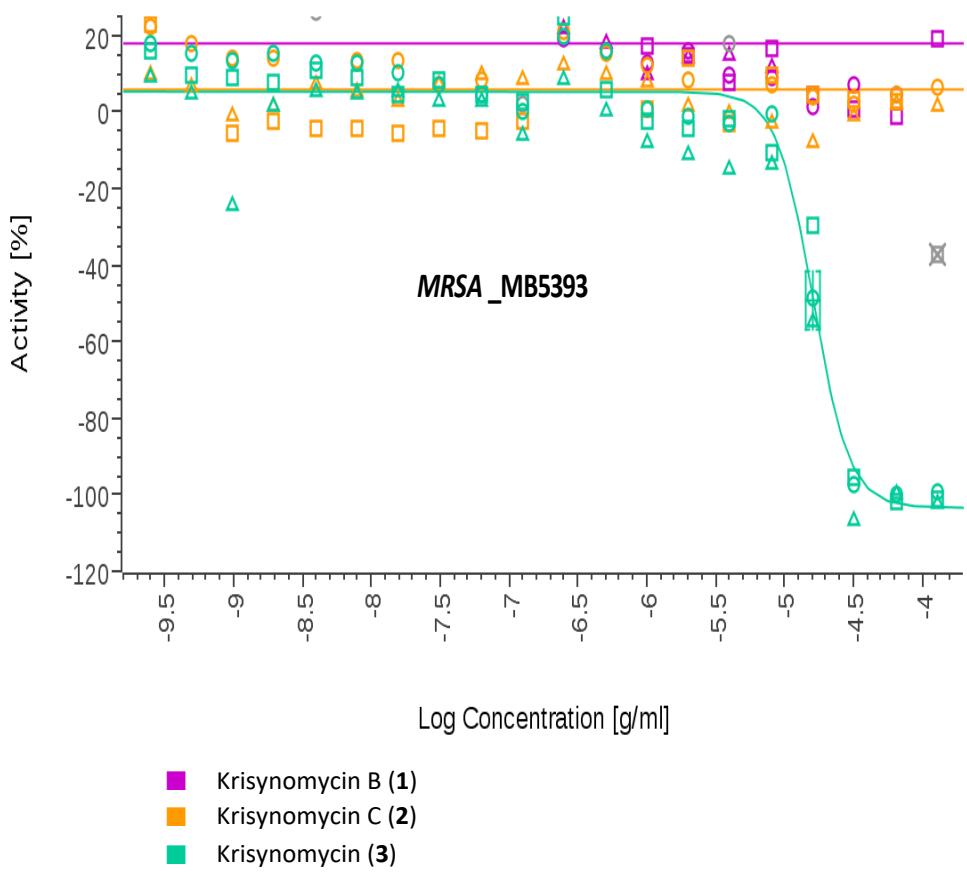


Figure S29. Antibacterial activity against MRSA of krisynomycins and krisynomycins with 4 µg/mL of imipenem.