Supplementary Information

Antibacterial peptidomimetics via fragment display on small-molecule scaffolds

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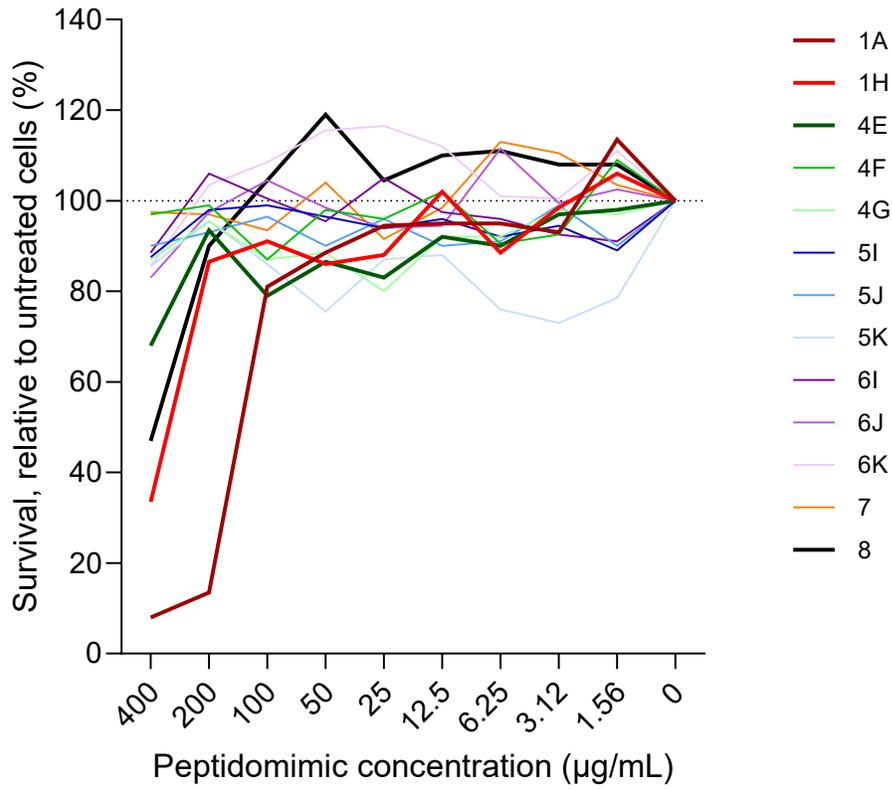
[3] Department of Microbiology, Oslo University Hospital and University of Oslo, Rikshospitalet, 0373 Oslo, Norway.

[4] Department of Clinical and Molecular Medicine, Norwegian University of Science and Technology, 7491 Trondheim, Norway.
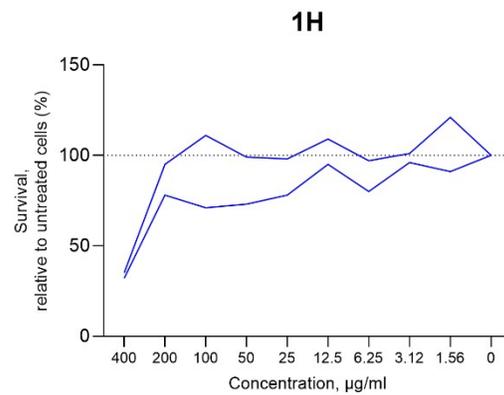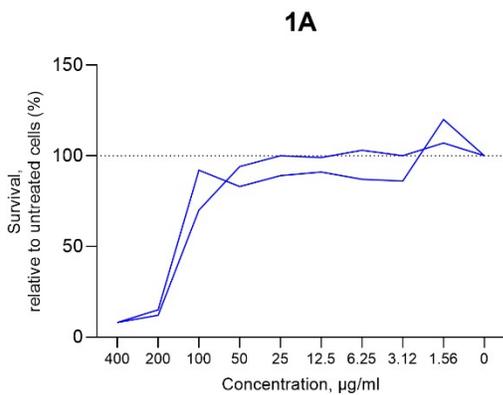
Contents

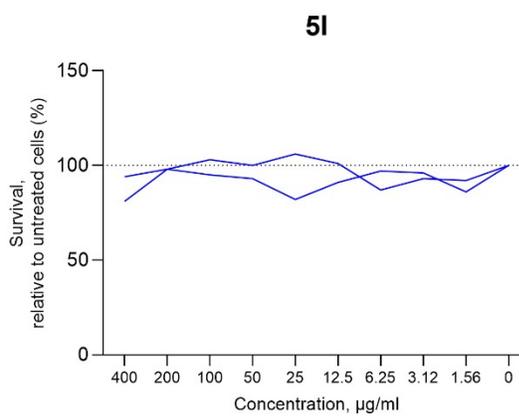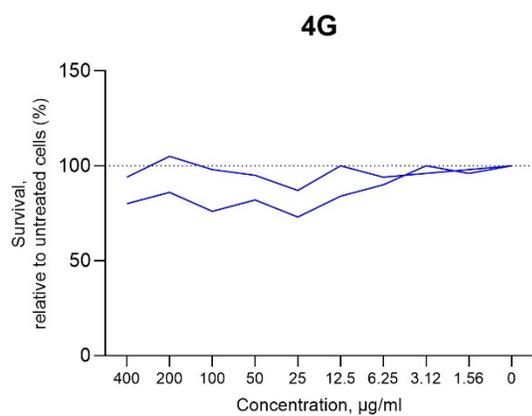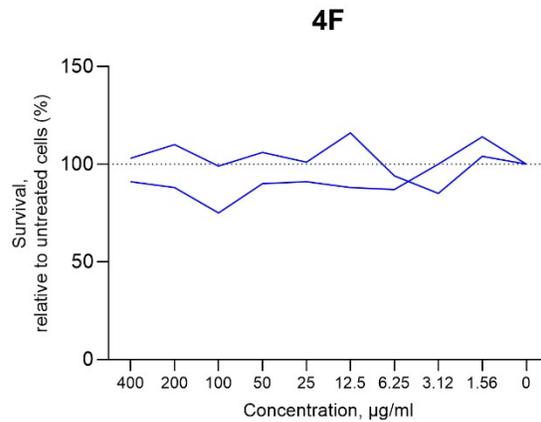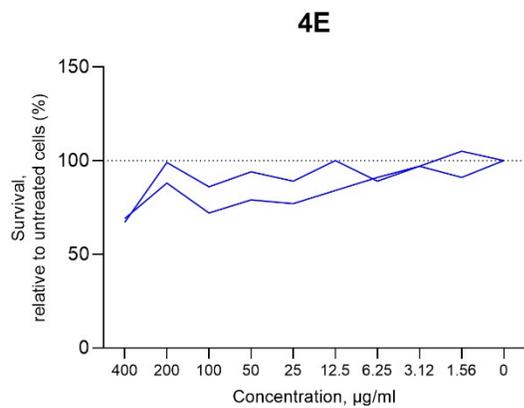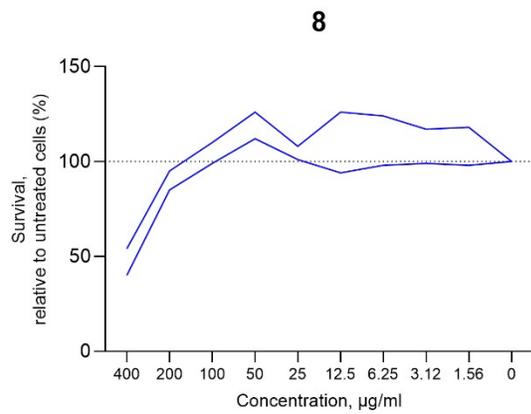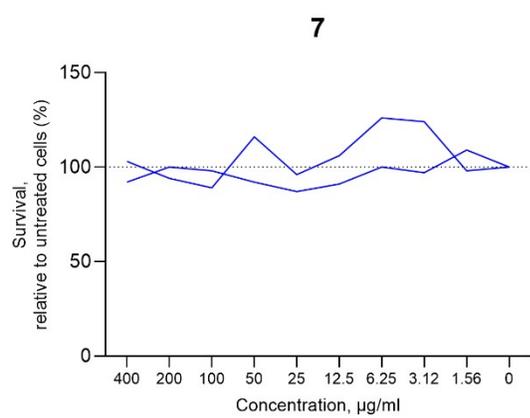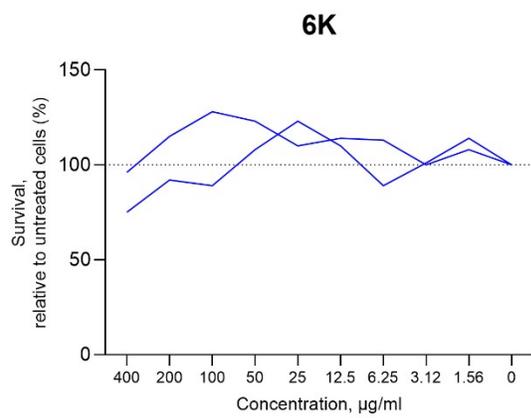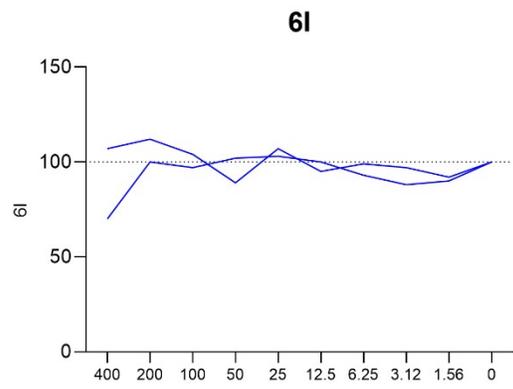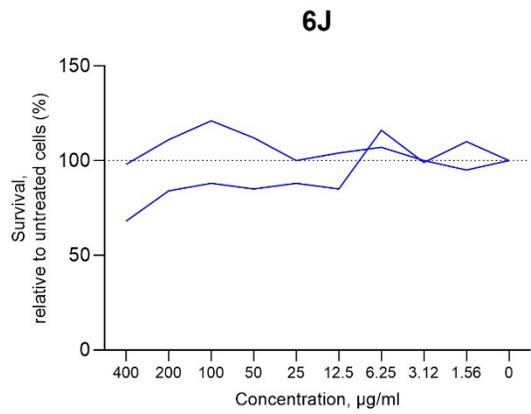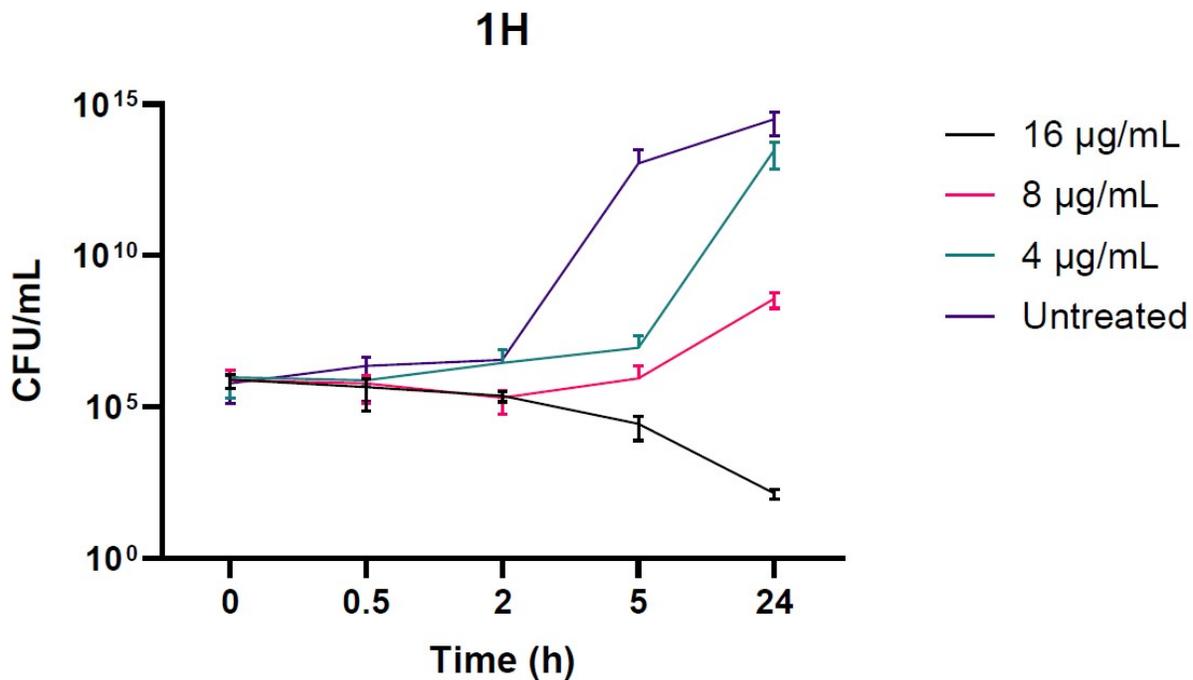# Effect on viability of fibroblast cells

Overall comparison of all tested compounds:

Separate experiments:

4E
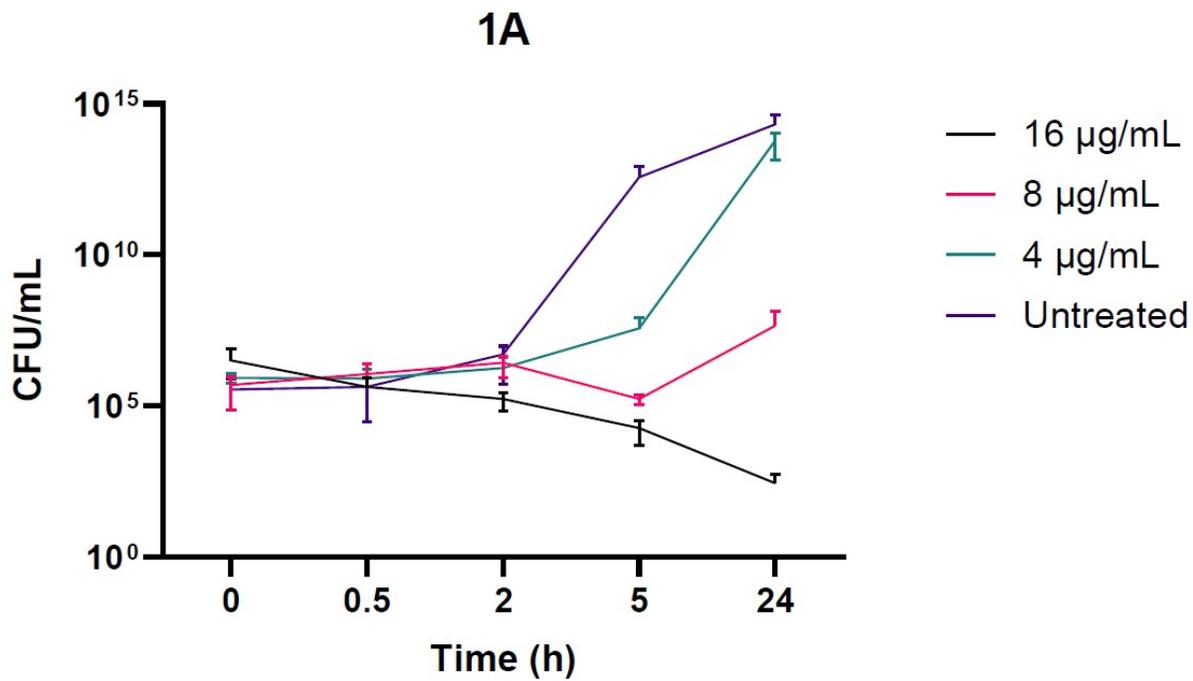
4F

4G

5I

5J

5K

6J

6I

6K

7

8
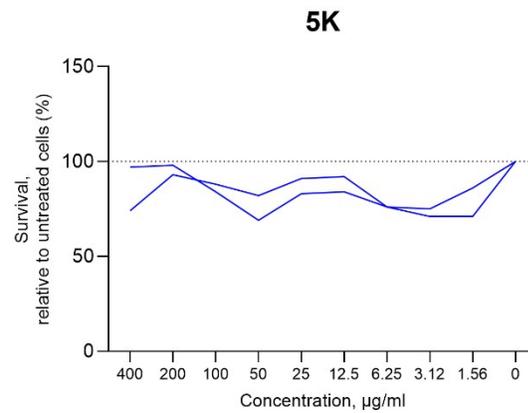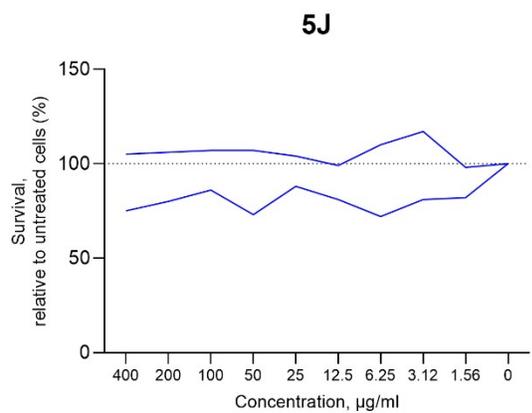
Time-Kill experiments (compounds **1A**, **1H**, **4E**, **6I**, and **8**)
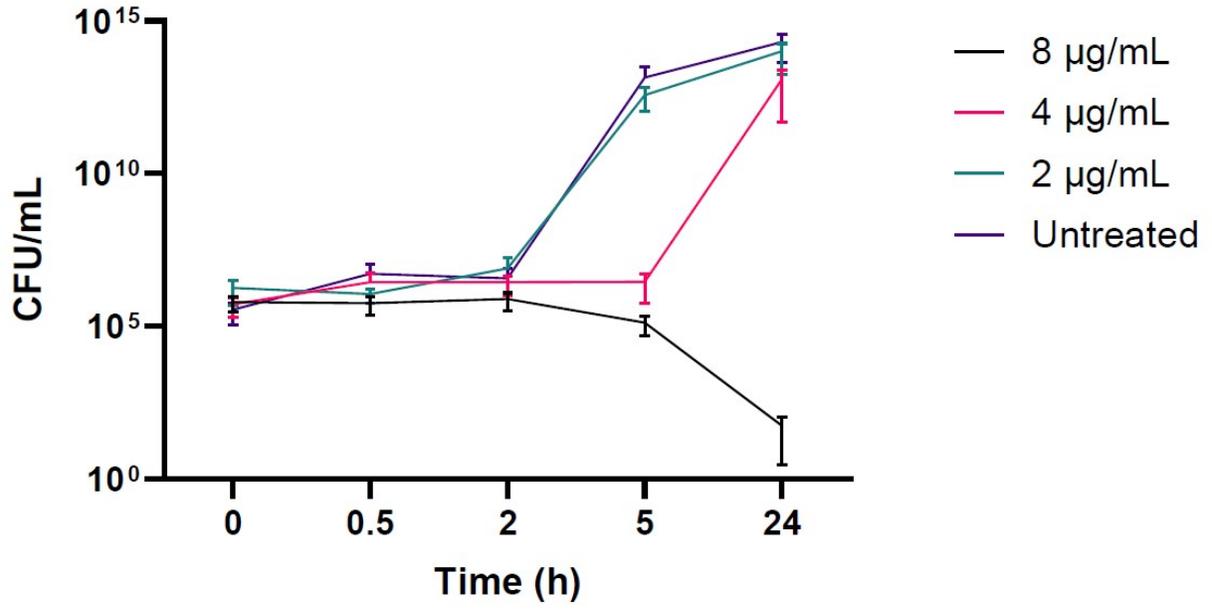
1A

1H

4E
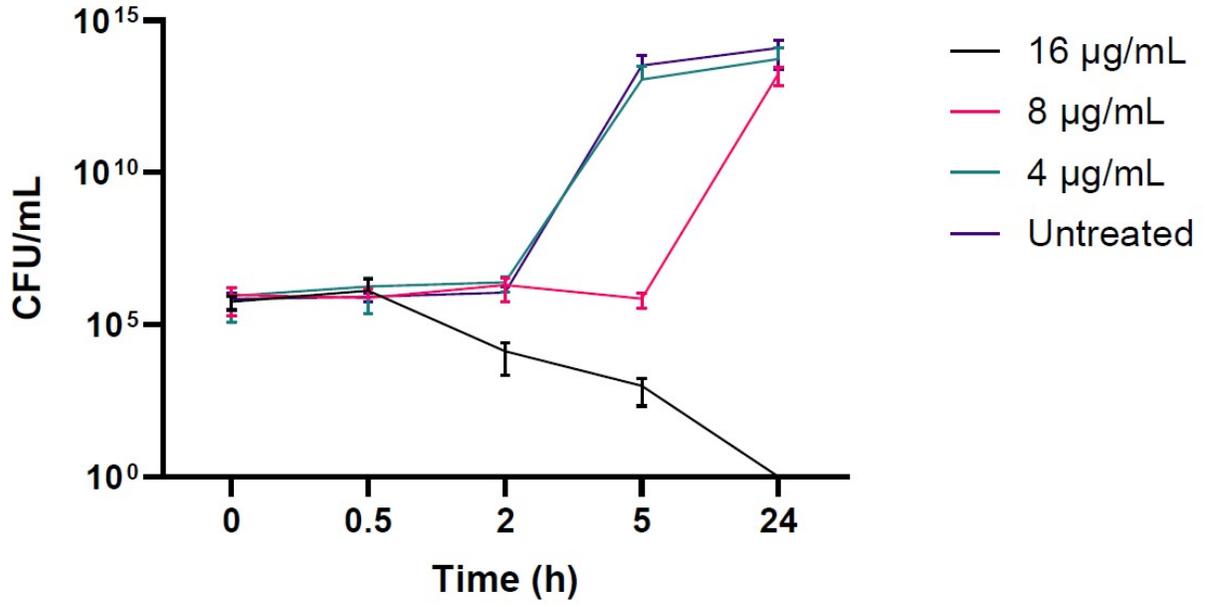
6I
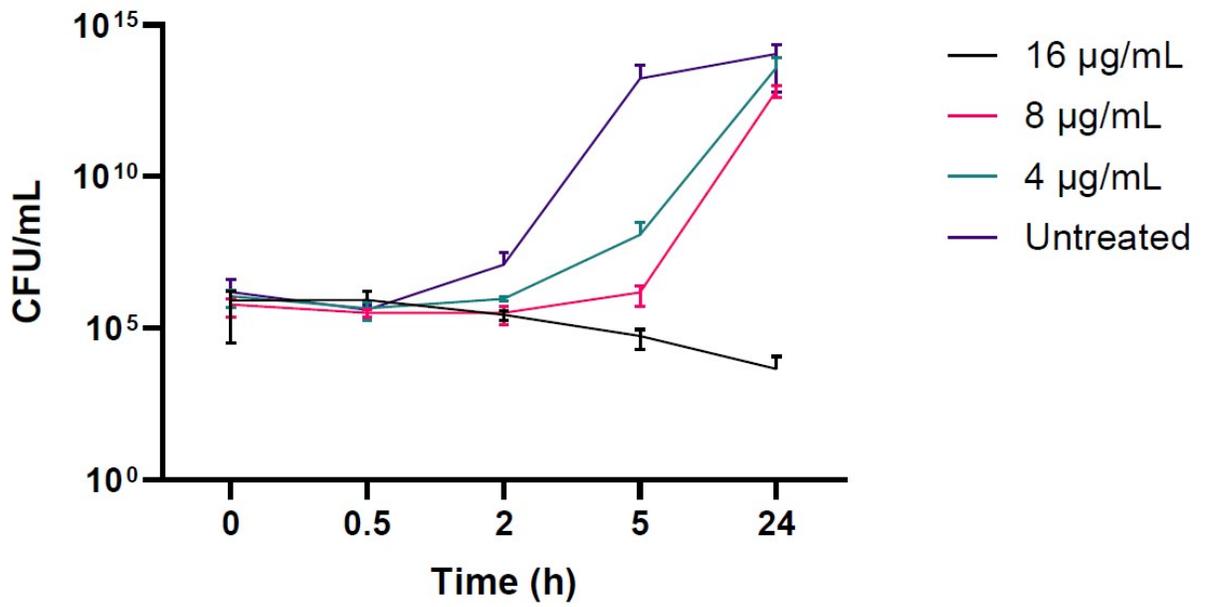
8

HPLC and MS

1A

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.96 min. Purity: 99.6%.

MS: Calculated for $C_{108}H_{149}F_6N_{21}O_{18}S_3$; m/z: $[M+2H]^{2+}$ 1119.52392, found 1118.06271

1B

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.91 min. Purity: 97.0%.

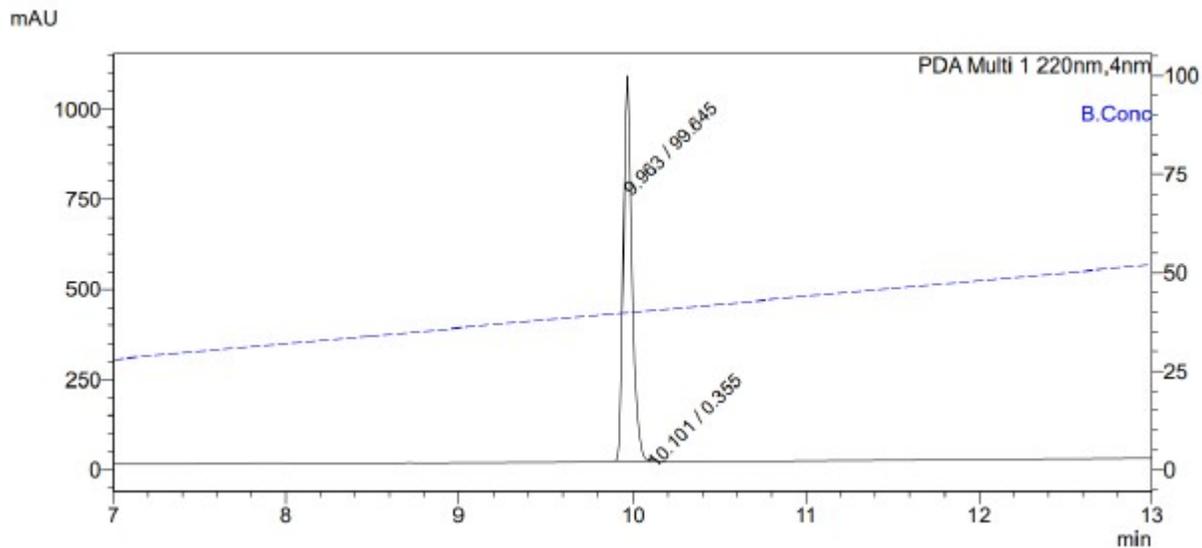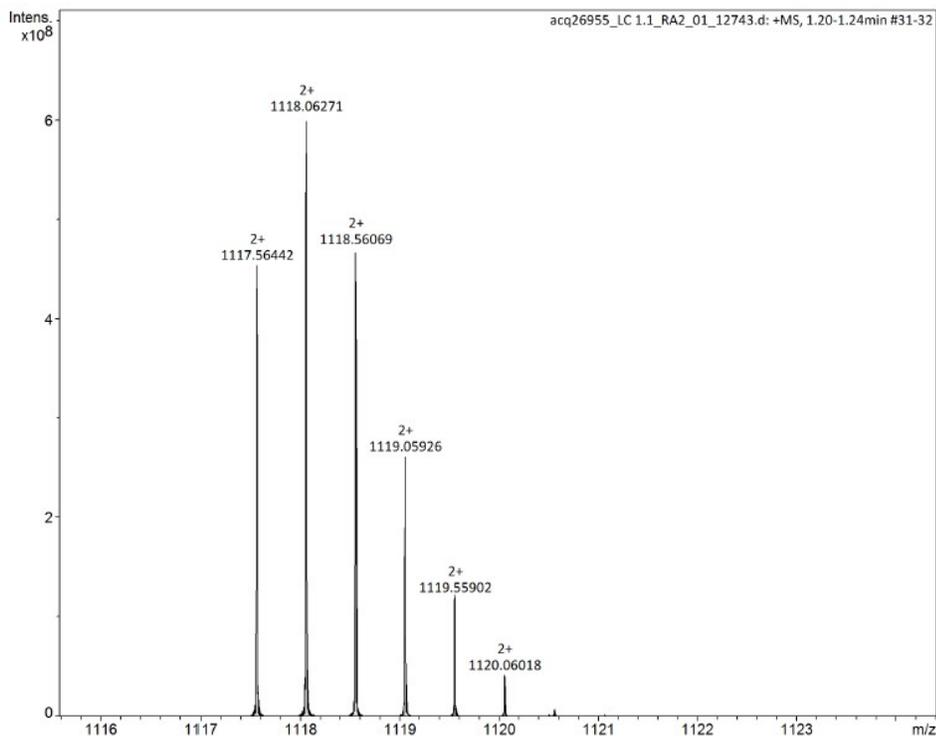**MS**: Calculated for $C_{111}H_{153}F_6N_{21}O_{18}S_3$; m/z: $[M+2H]^{2+}$ 1140.054739, found 1139.08518

1C

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 10.10 min. Purity: >99.9%.

MS: Calculated for $C_{114}H_{159}F_6N_{21}O_{18}S_3$; m/z: $[M+2H]^{2+}$ 1161.57087, found 1160.09973

1D

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.70min. Purity: 95.1%.
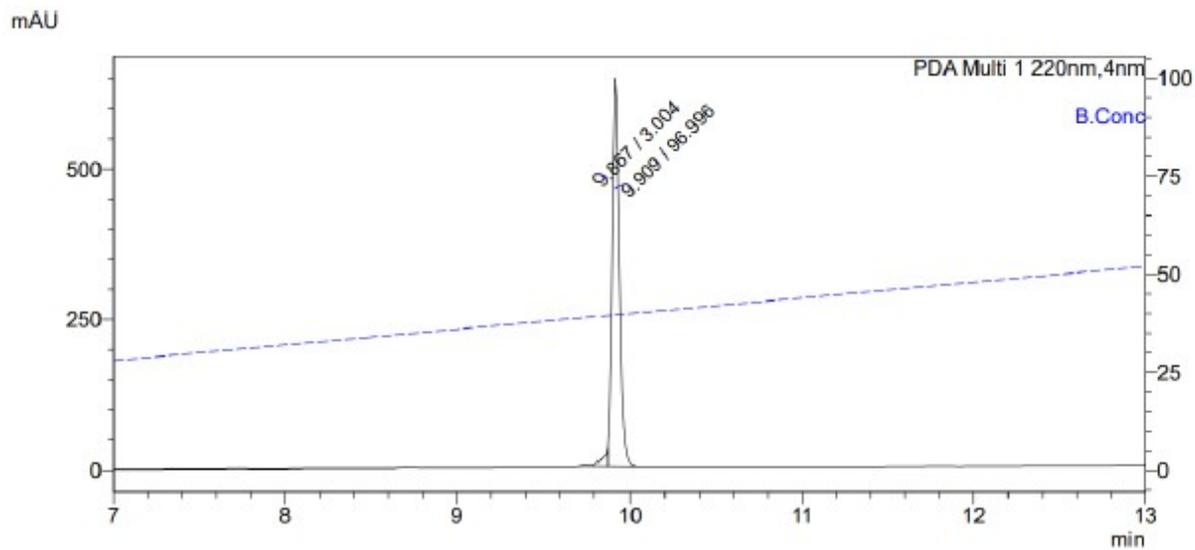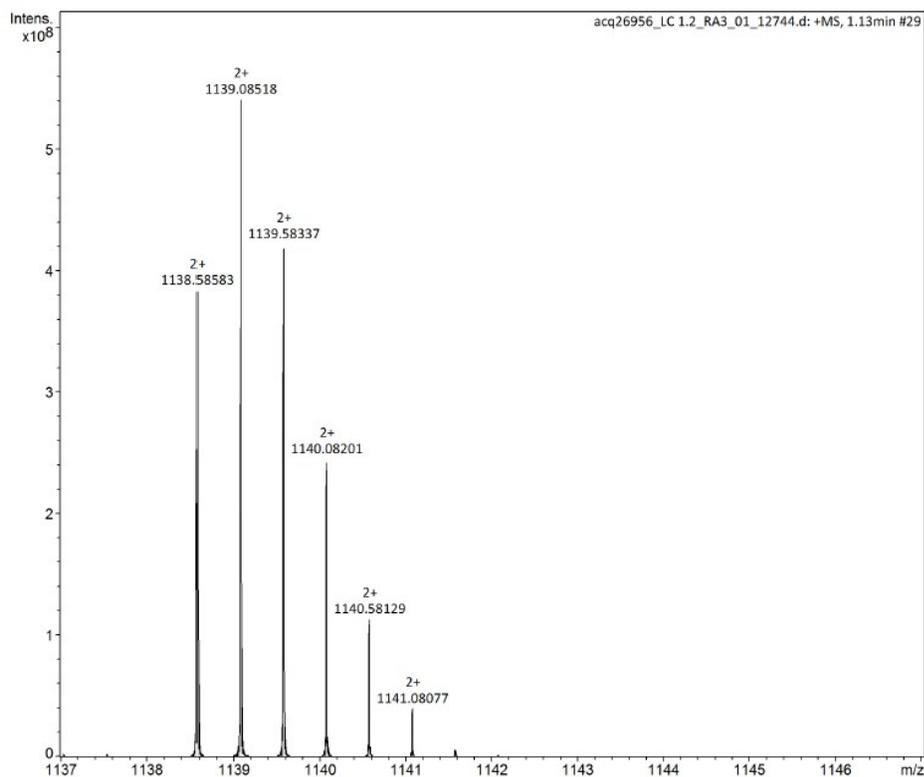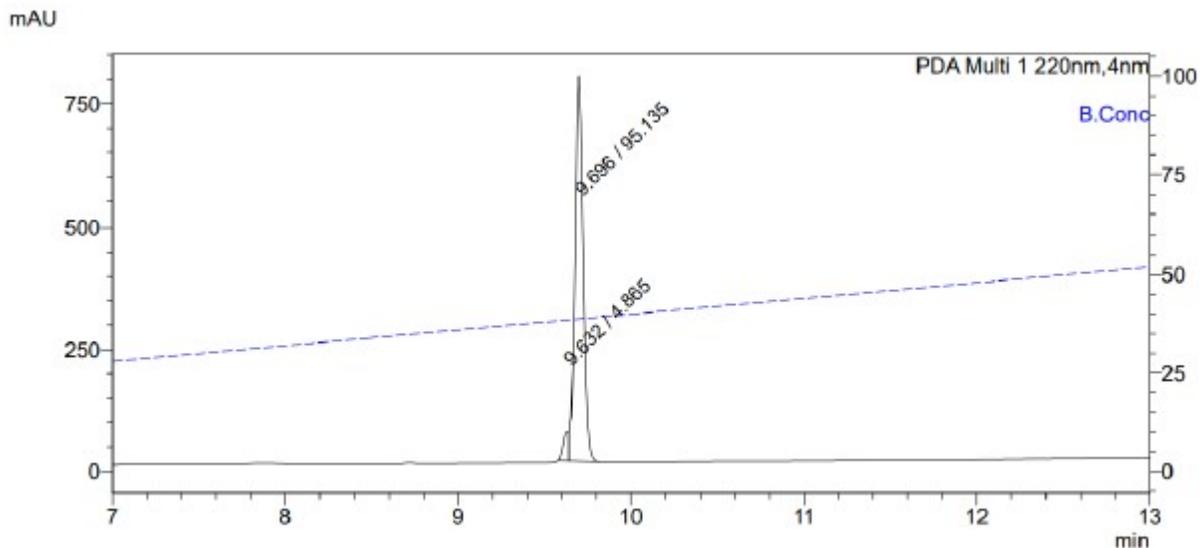

MS: Calculated for $C_{142}H_{198}F_8N_{32}O_{20}S_4$; m/z: $[M+3H]^{3+}$ 985.14890, found 985.14997

1E

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 10.25 min. Purity: 99.7%.
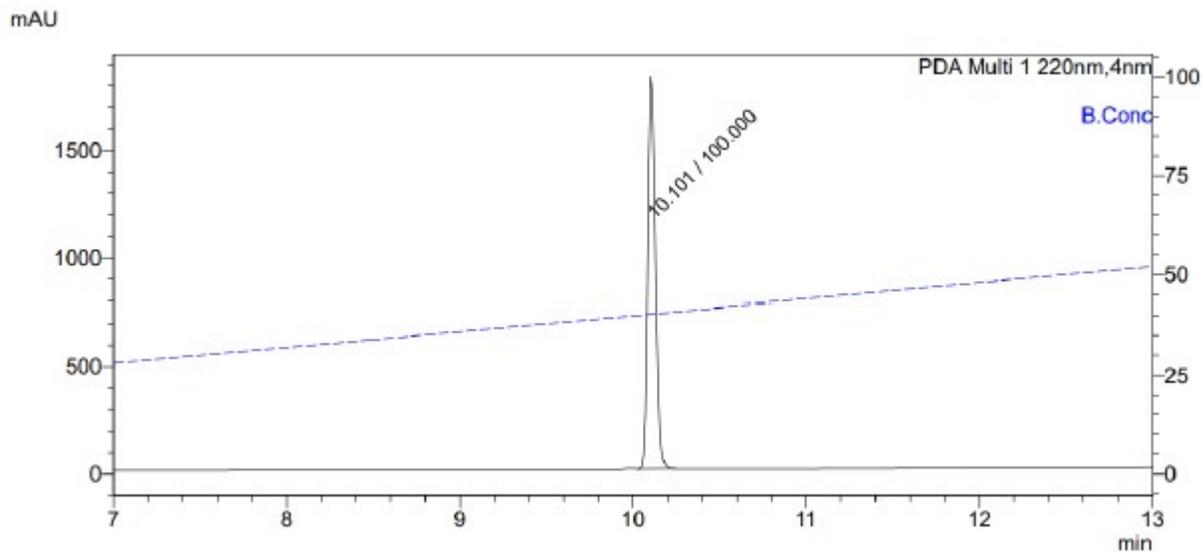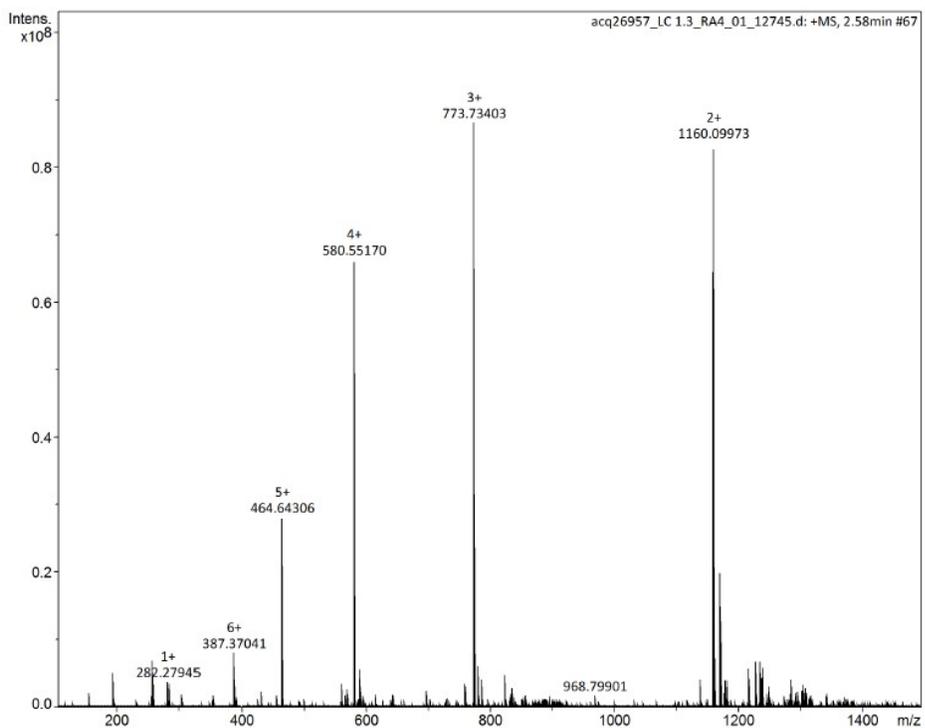

MS: Calculated for $C_{74}H_{100}F_4N_{14}O_{12}S_2$; m/z: $[M+2H]^{2+}$ 759.35841, found 758.37461

1H

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.73 min. Purity: 94.8%.
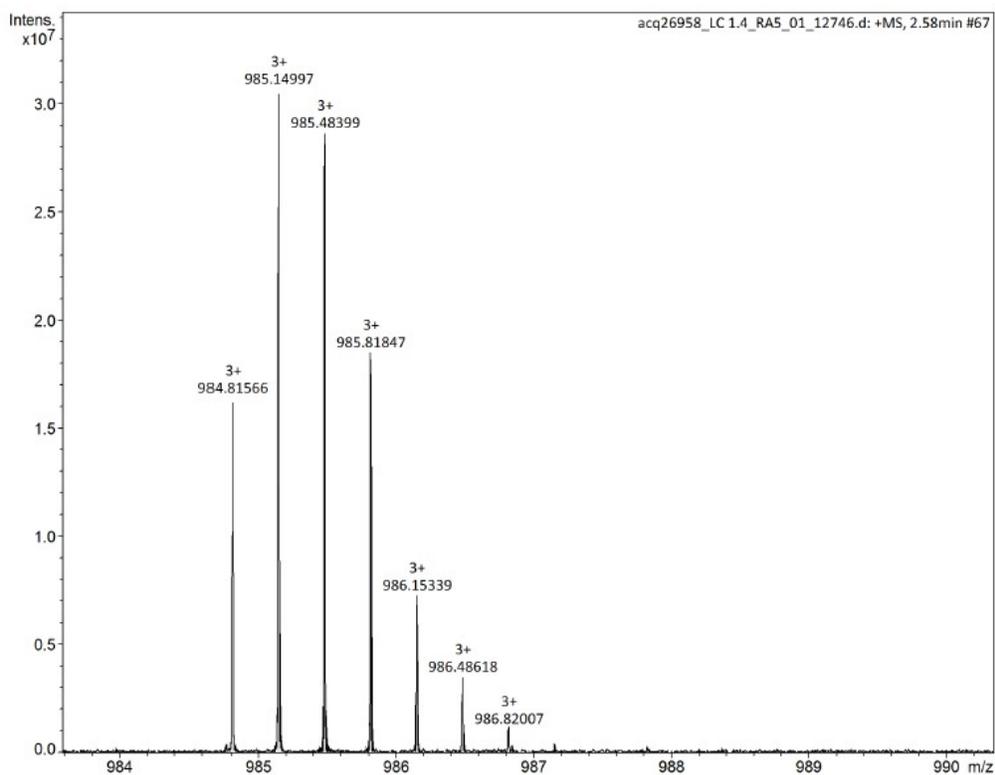

MS: Calculated for $C_{111}H_{156}F_6N_{24}O_{21}S_3$; m/z: $[M+2H]^{2+}$ 1187.05612, found 1185.57995

2D-c1

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.08 min. Purity: >99.9%.
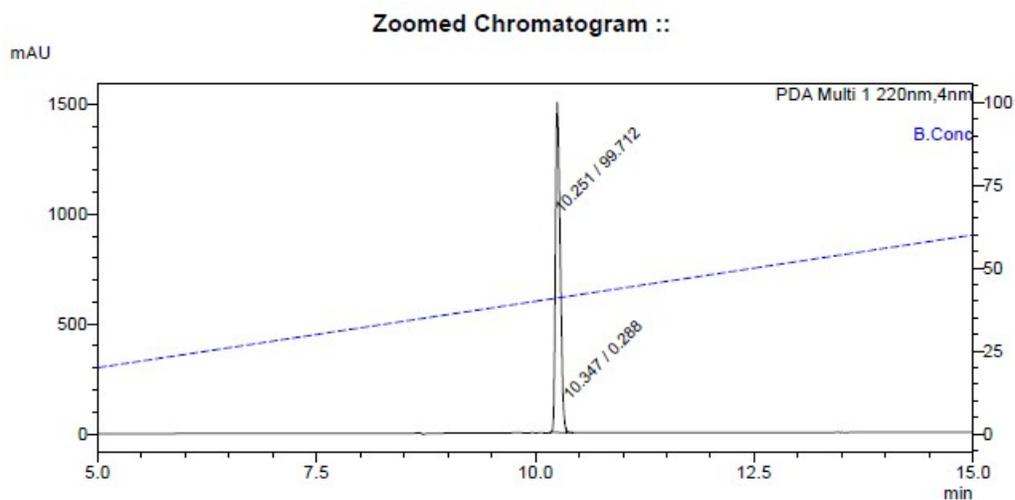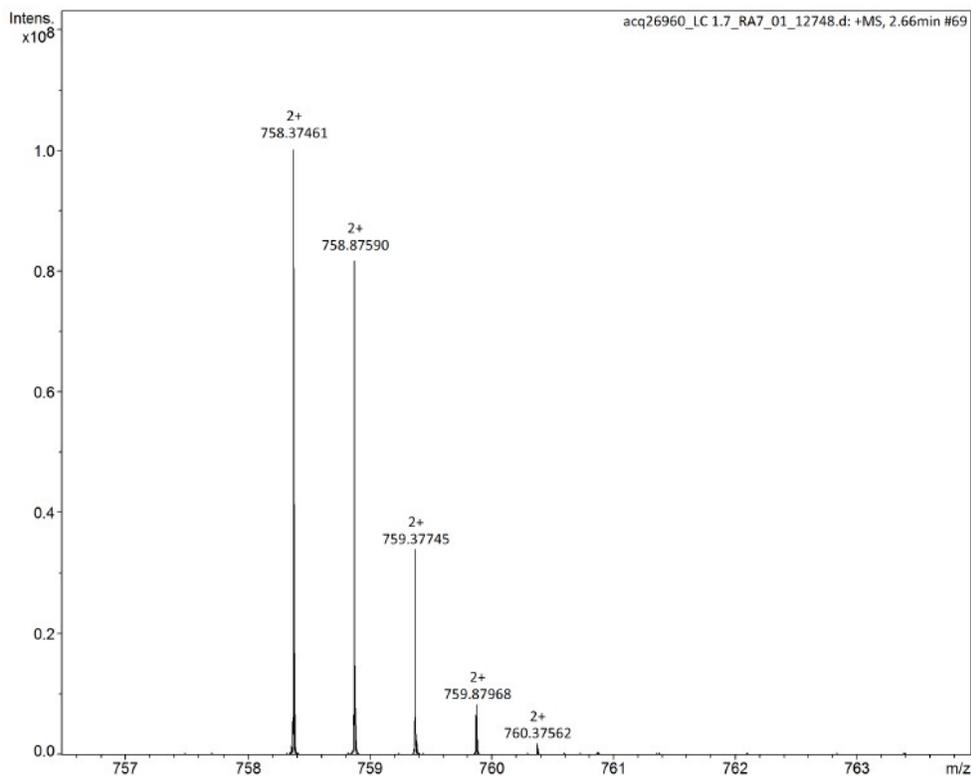

MS: Calculated for $C_{112}H_{150}F_6N_{22}O_{18}S_4$; m/z: $[M+2H]^{2+}$ 1168.02323, found 1167.03972

2D-c2

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.38 min. Purity: 95.3%.
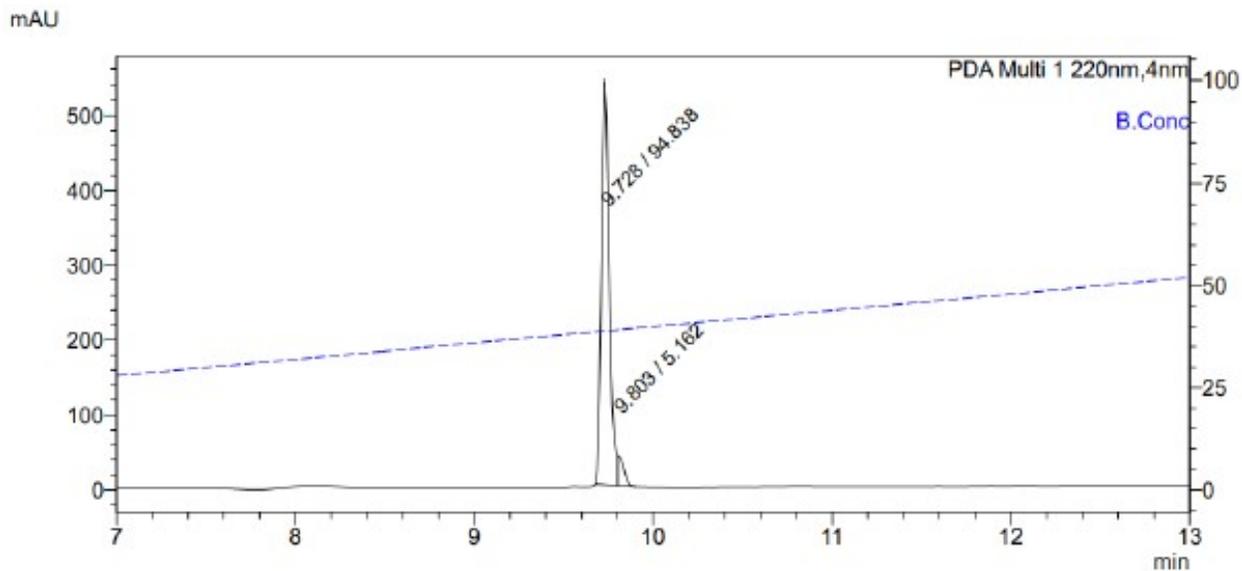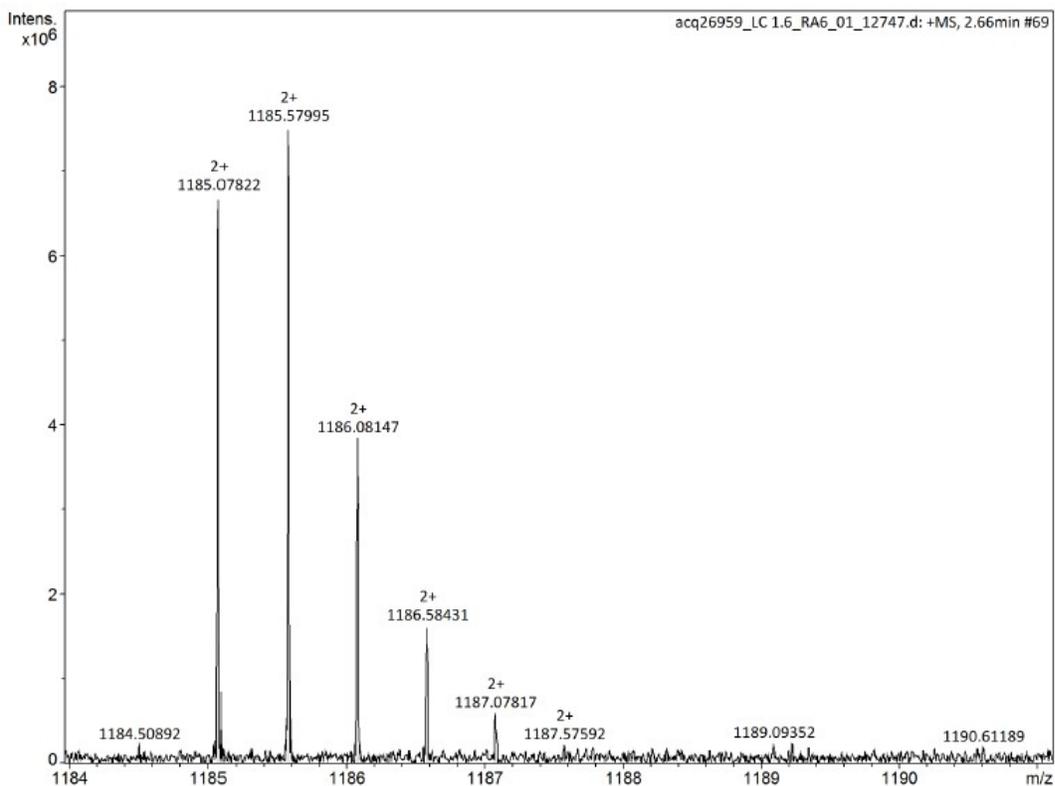

MS: Calculated for $C_{112}H_{150}F_6N_{22}O_{18}S_4$; m/z: $[M+2H]^{2+}$ 1168.02323, found 1167.03821

3D-c1

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.02 min. Purity: 96.5%.
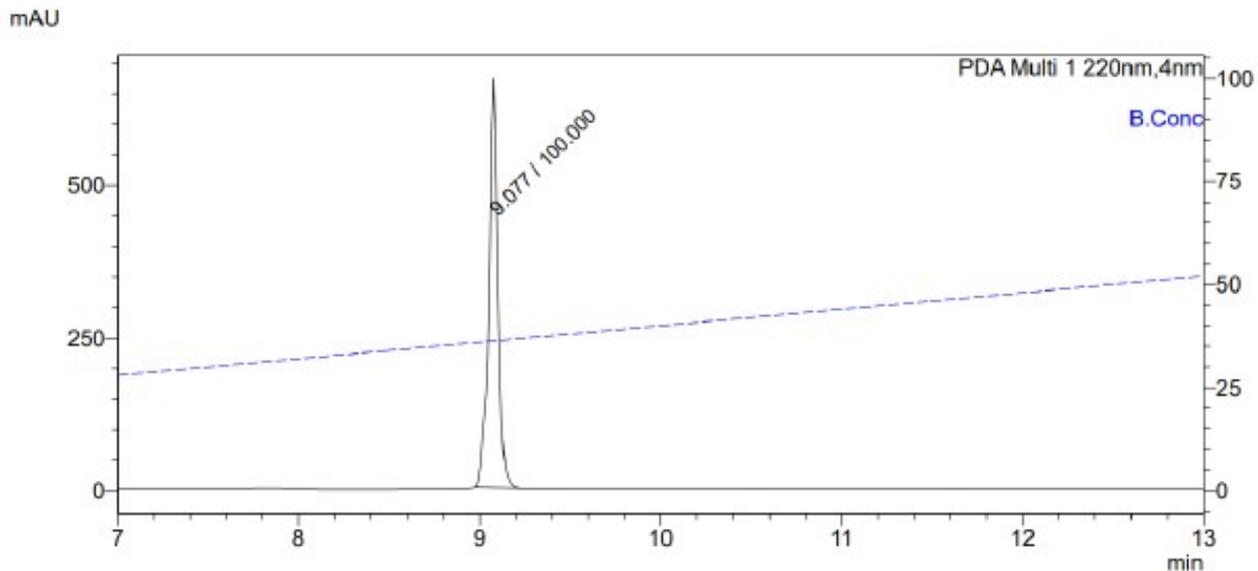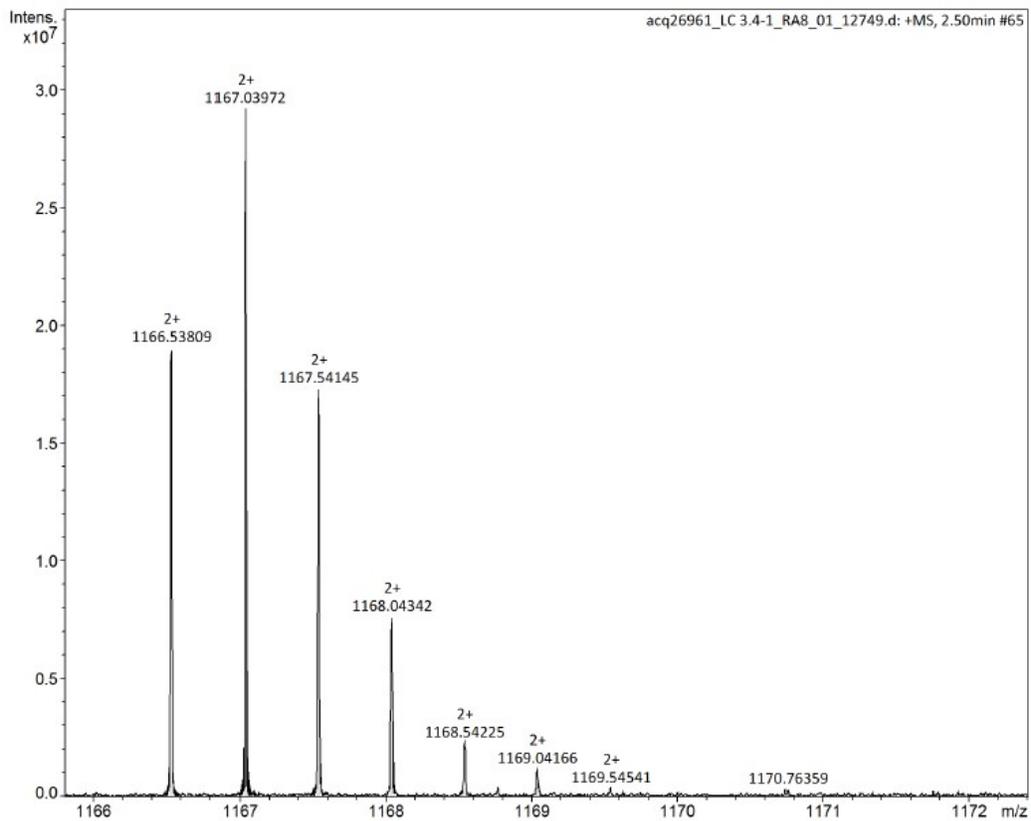

MS: Calculated for $C_{82}H_{110}F_4N_{16}O_{14}S_4$; m/z: $[M+2H]^{2+}$ 874.36760, found 873.38304

3D-c2

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.48 min. Purity: 96.4%.
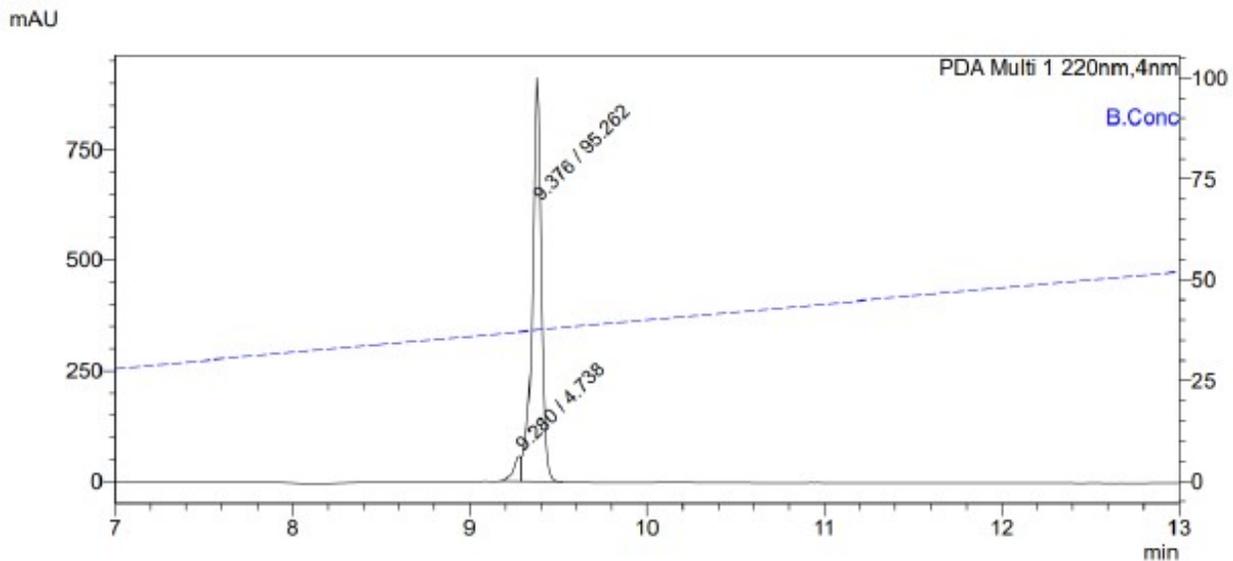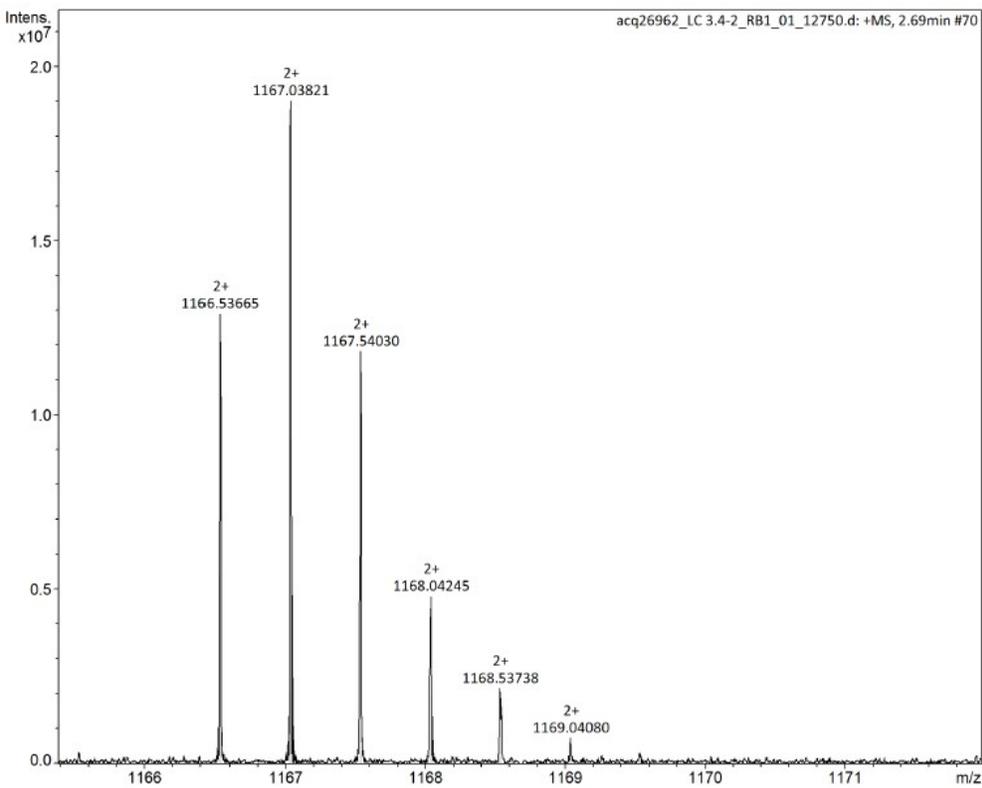

MS: Calculated for $C_{82}H_{110}F_4N_{16}O_{14}S_4$; m/z: $[M+2H]^{2+}$ 874.36760, found 873.38251

4E

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.80 min. Purity: 99.1%.
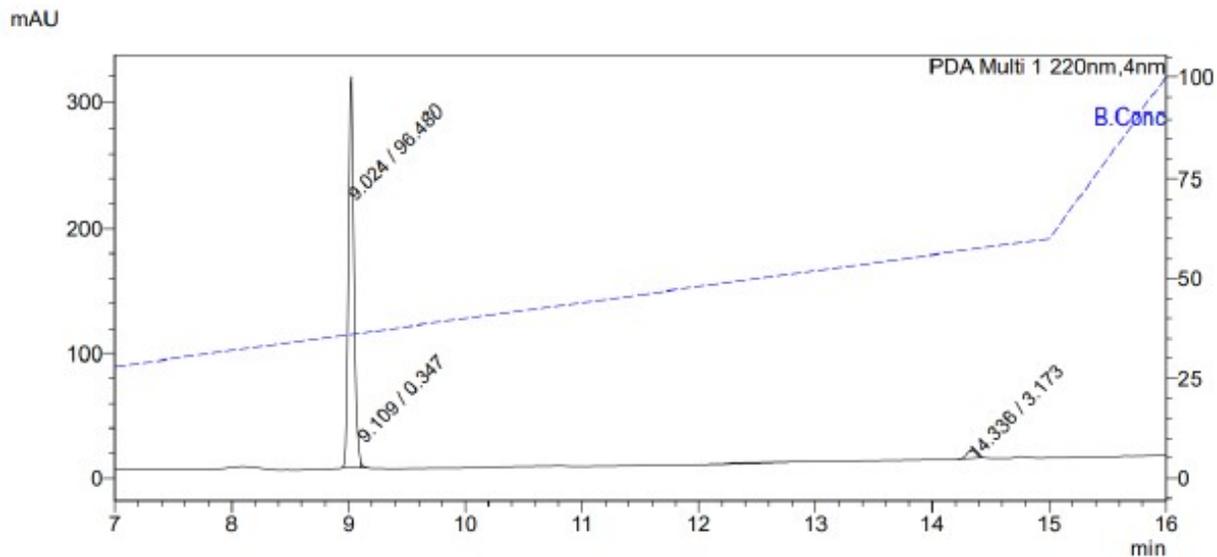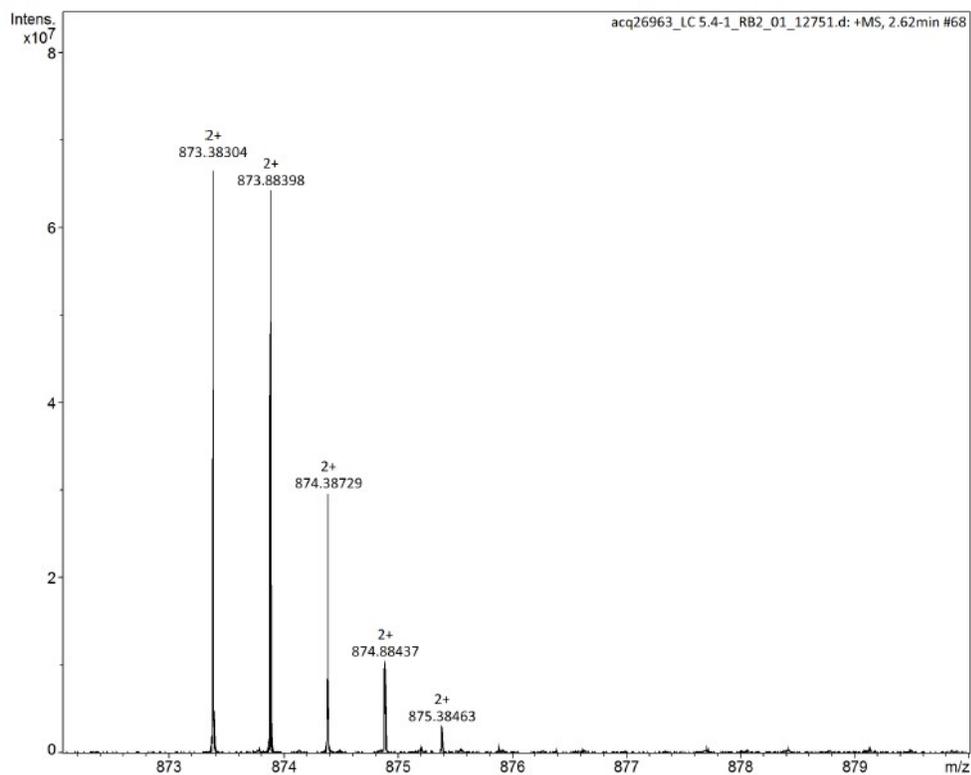

MS: Calculated for $C_{86}H_{122}F_4N_{18}O_{13}S_2$; m/z: $[M+2H]^{2+}$ 878.44809, found 877.95667

4F

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.50 min. Purity: 99.5%.
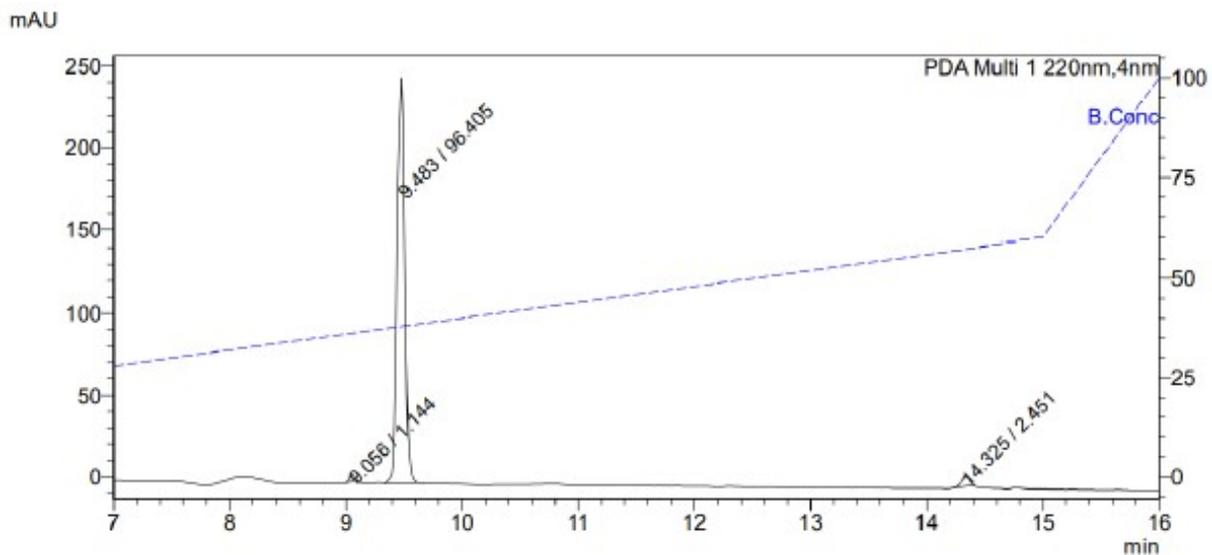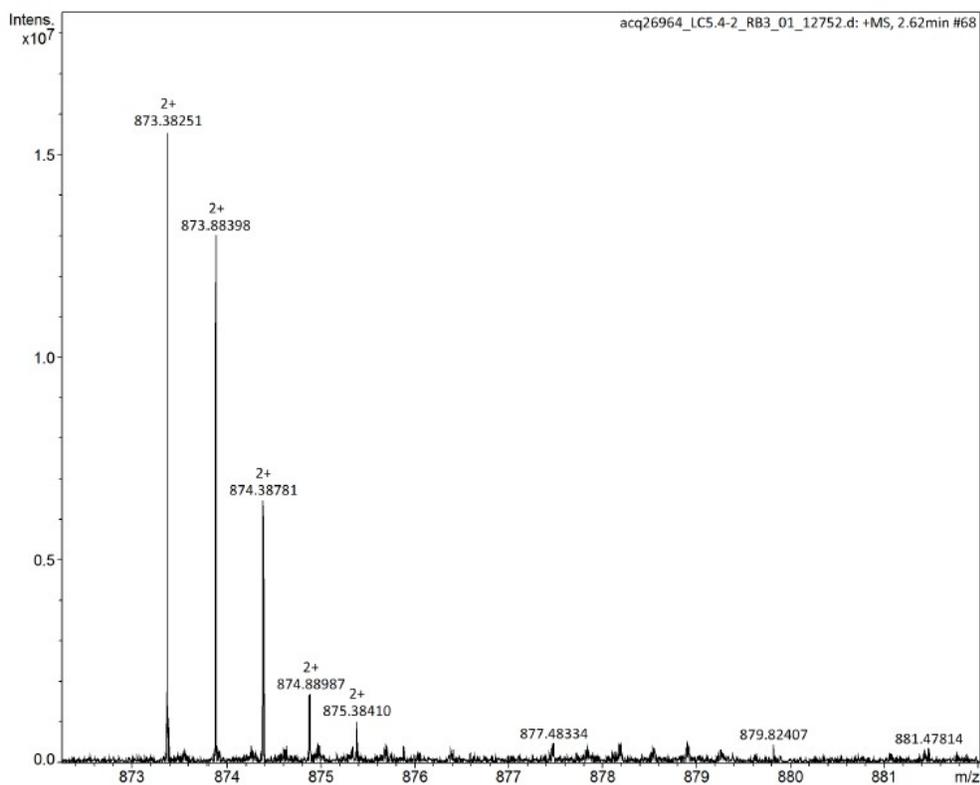

MS: Calculated for $C_{86}H_{122}F_4N_{18}O_{13}S_2$; m/z: $[M+2H]^{2+}$ 878.44809, found 877.95547

4G

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.82 min. Purity: >99.9%.
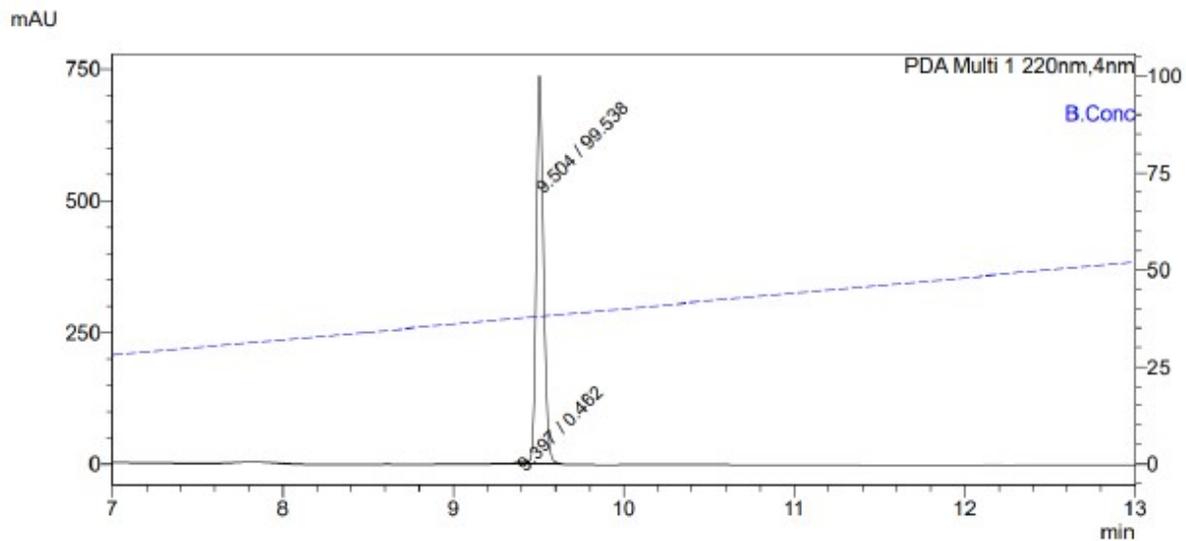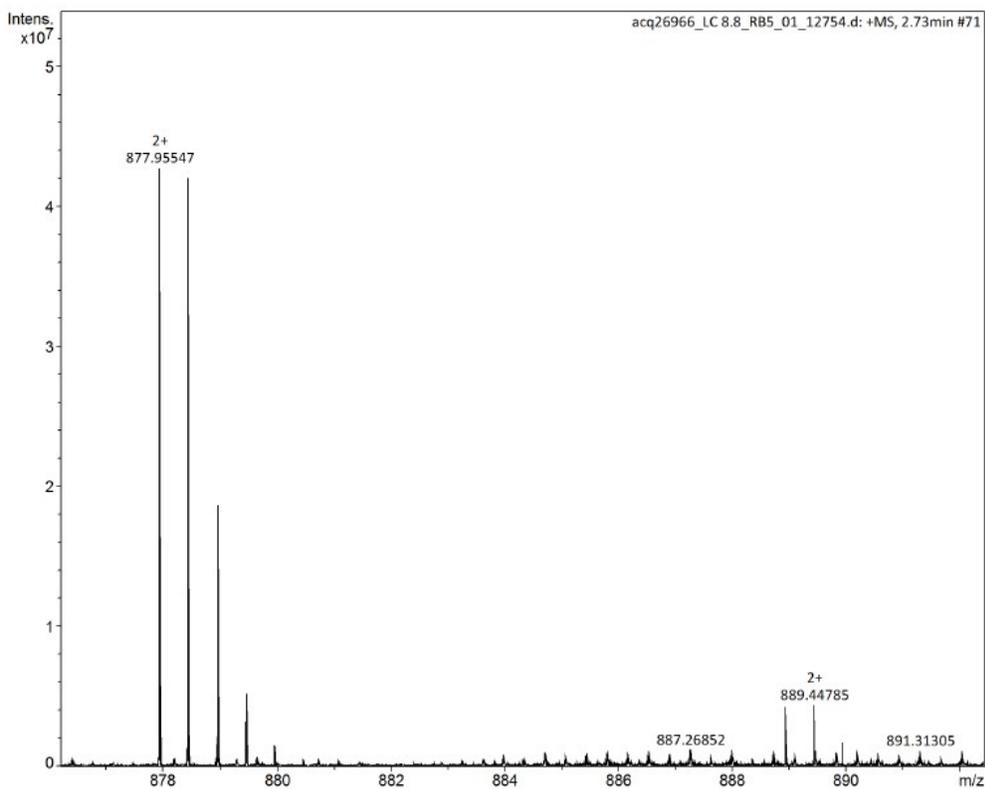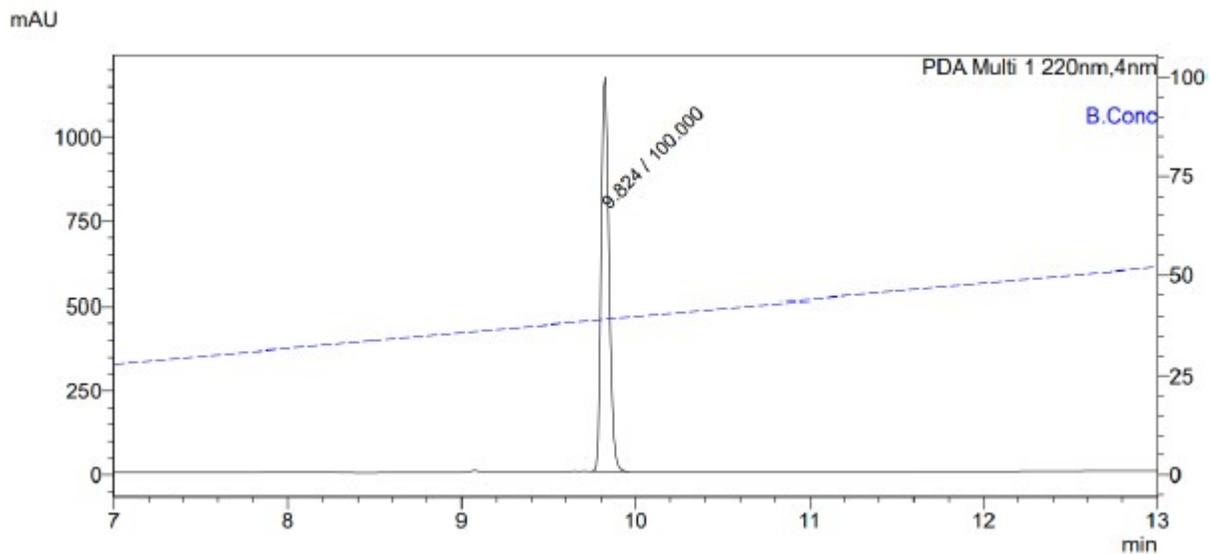

MS: Calculated for $C_{86}H_{122}F_4N_{18}O_{13}S_2$; m/z: $[M+2H]^{2+}$ 878.44809, found 877.95491
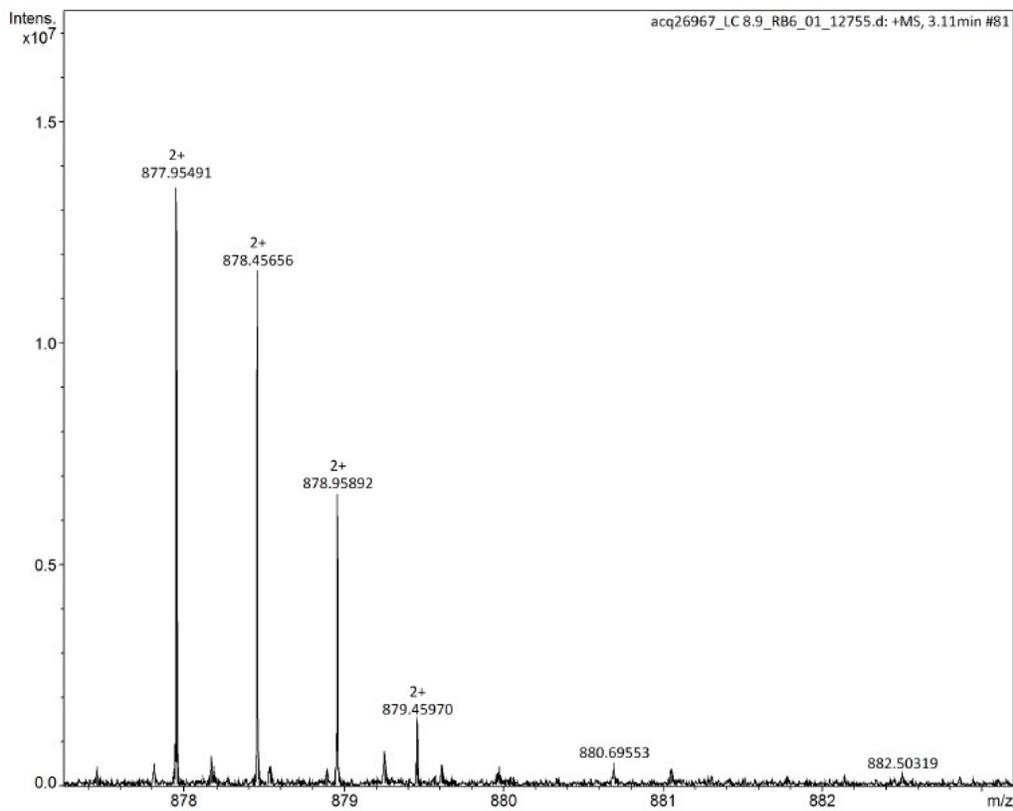
5I

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 8.72 min. Purity: 97.3%.
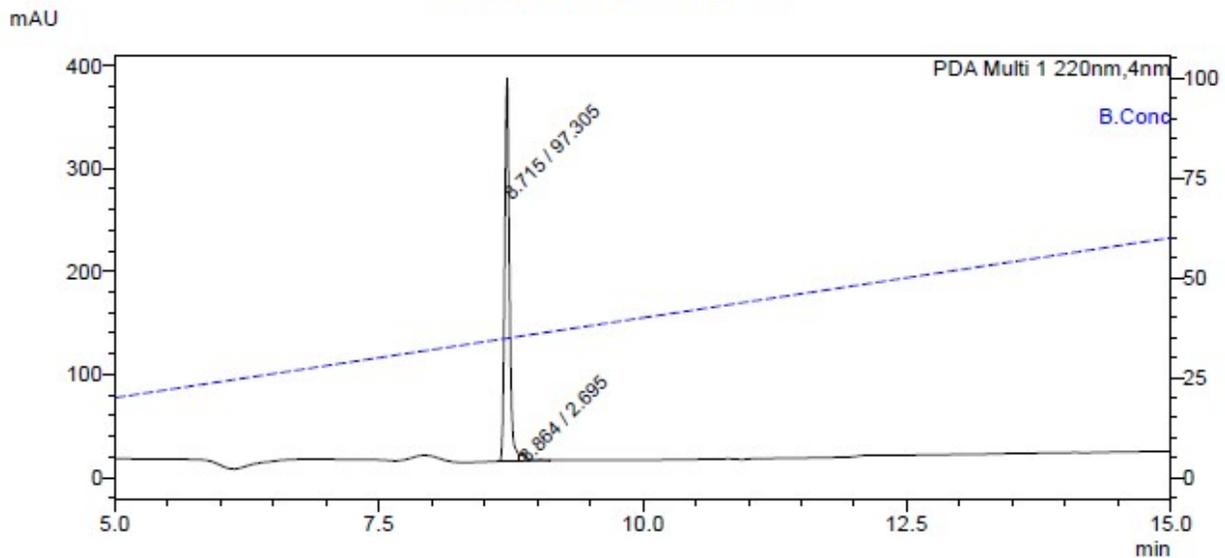

HR-MS: Calculated for $C_{102}H_{155}N_{21}O_{12}$; m/z: $[M+2H]^{2+}$ 934.61698, found 934.63805
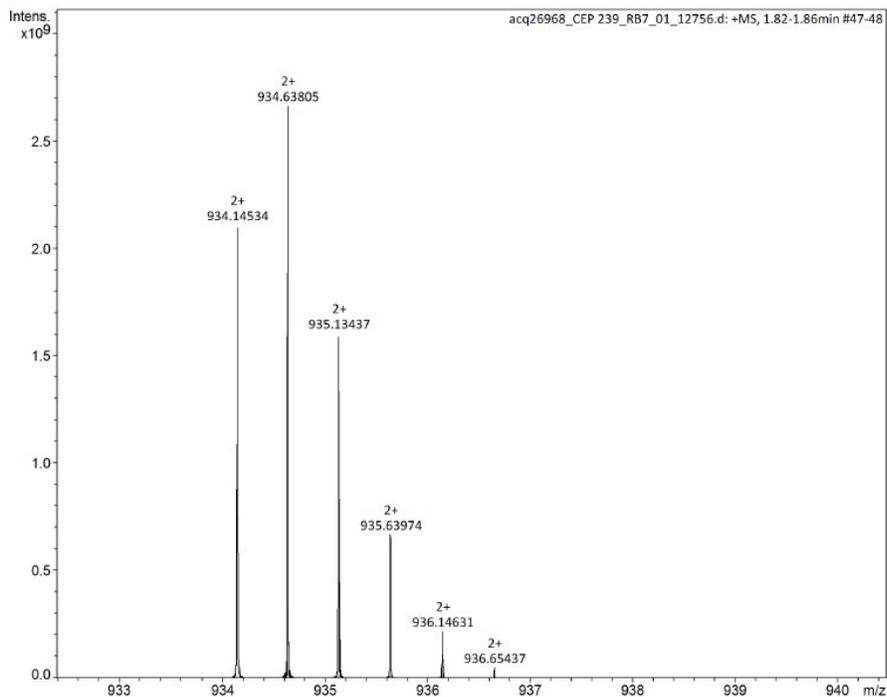
5J

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 8.70 min. Purity: 90.2%.

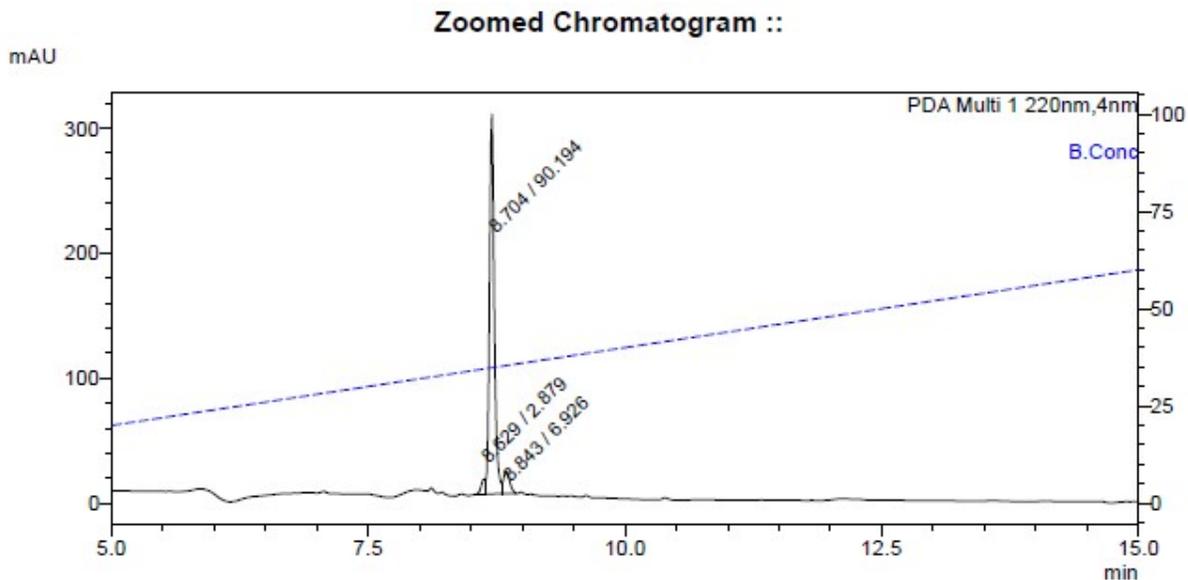**HR-MS**: Calculated for $C_{102}H_{153}N_{21}O_{12}$; m/z: $[M+2H]^{2+}$ 933.60933, found 933.60916
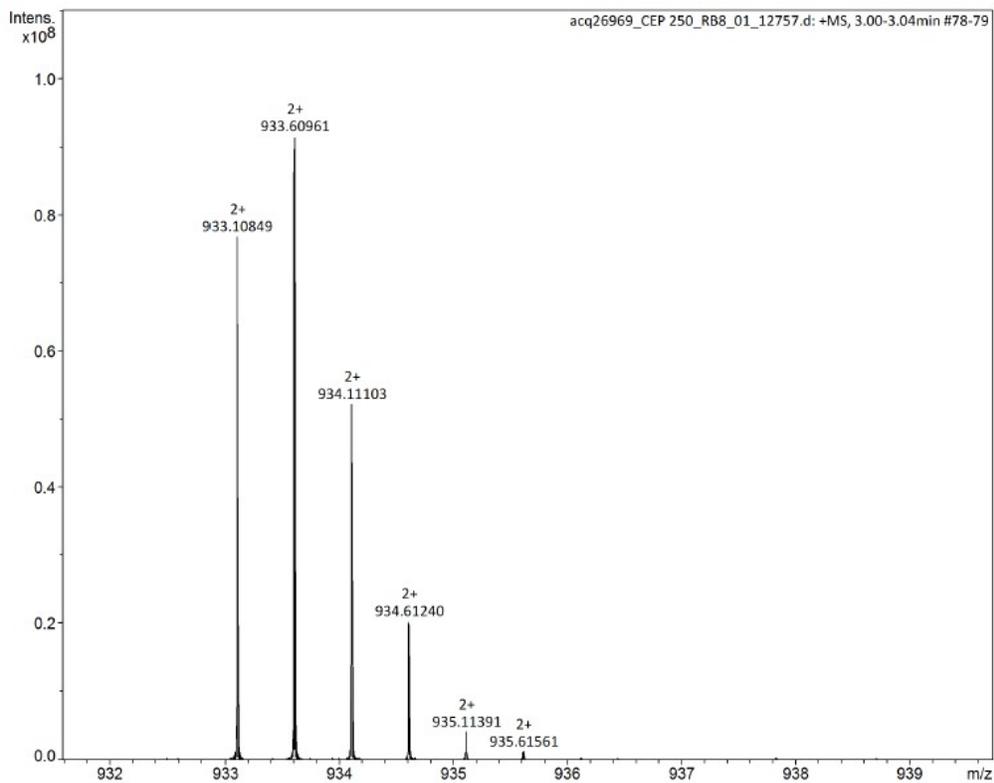
5K

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 8.40 min. Purity: 99.0%.
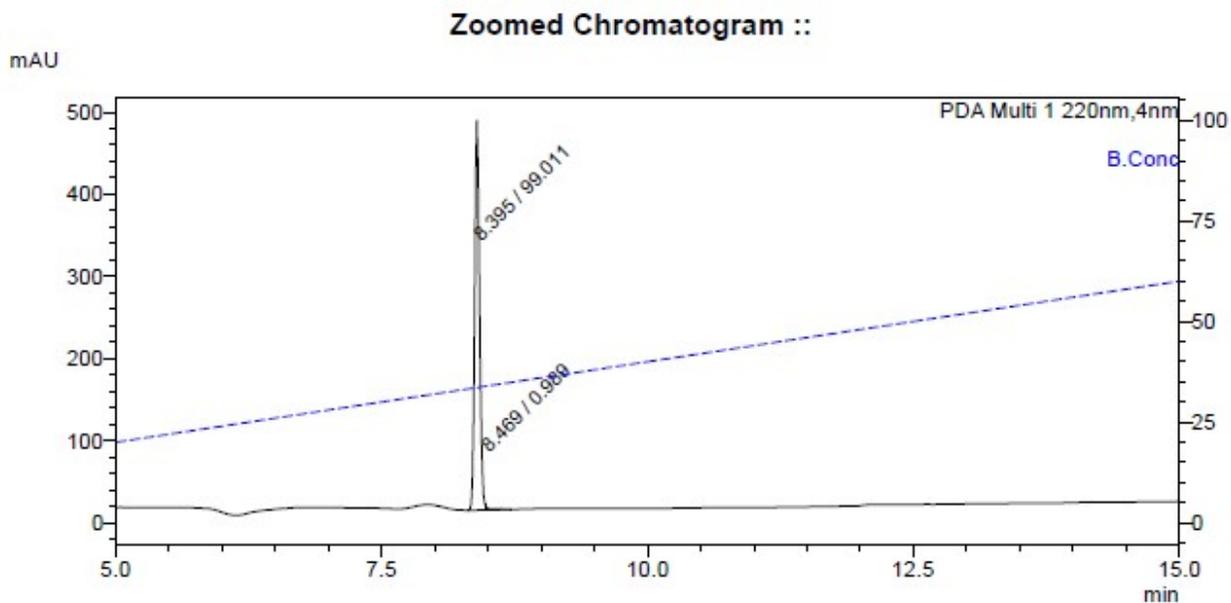

HR-MS: Calculated for $C_{102}H_{156}N_{22}O_{12}$; m/z: $[M+2H]^{2+}$ 942.12261, found 942.12265
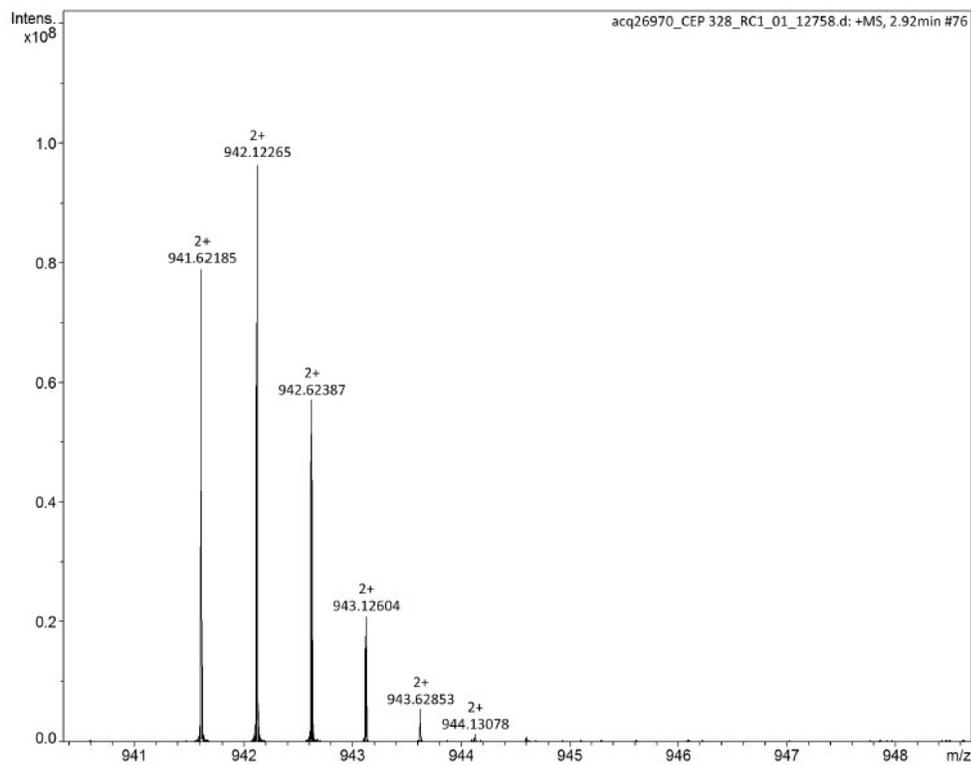
6l

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.38 min. Purity: 99.4%.
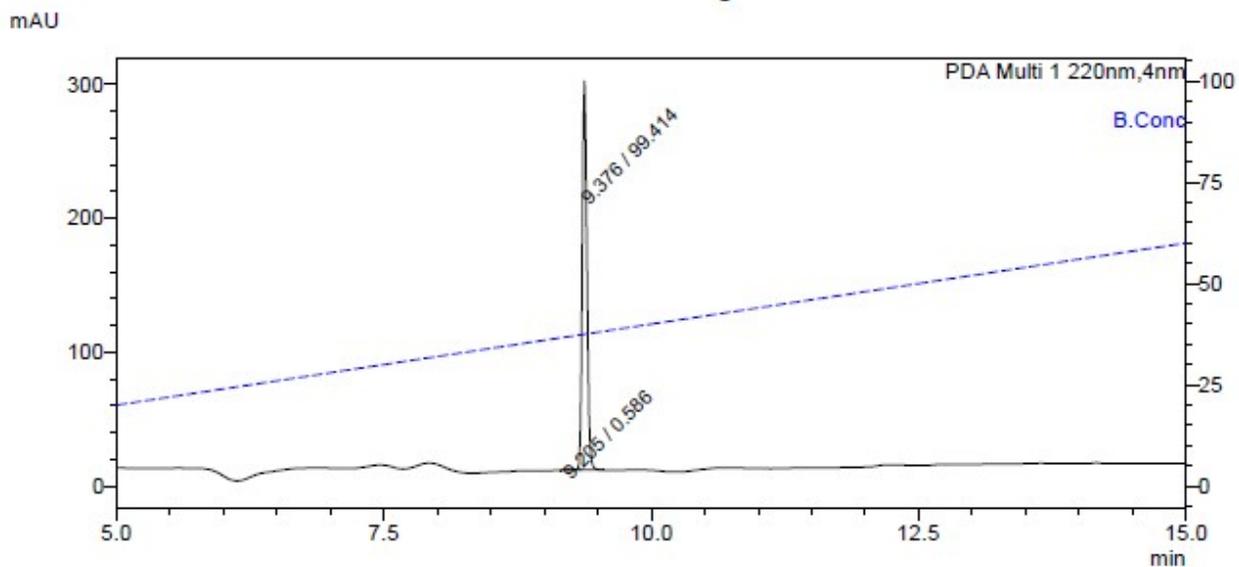

HR-MS: Calculated for $C_{102}H_{149}F_6N_{21}O_{12}$; m/z: $[M+2H]^{2+}$ 988.58871, found 988.58984
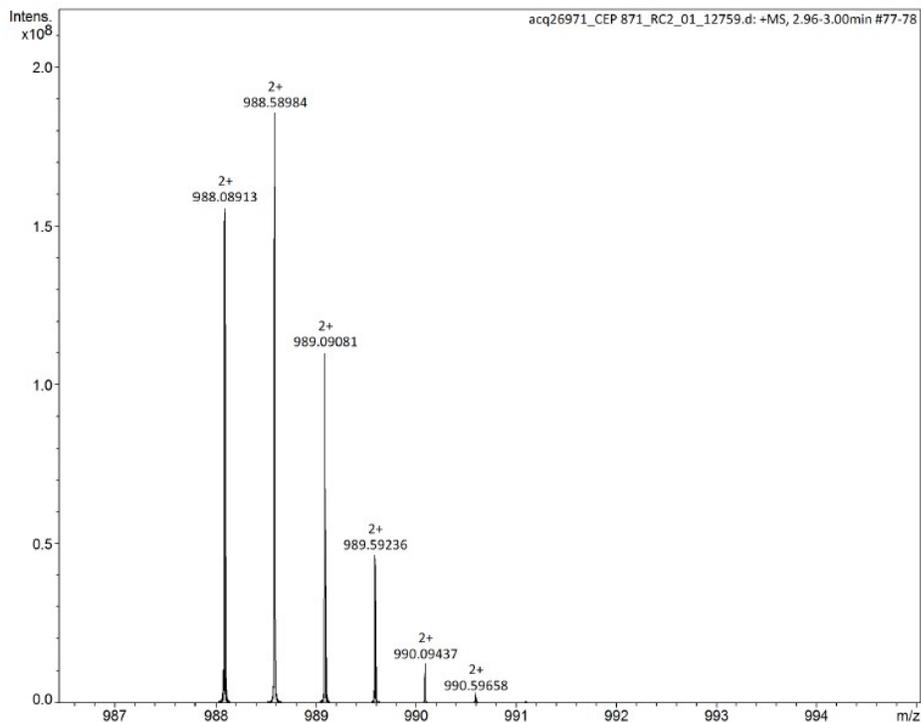
6J

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.37 min. Purity: 99.6%.

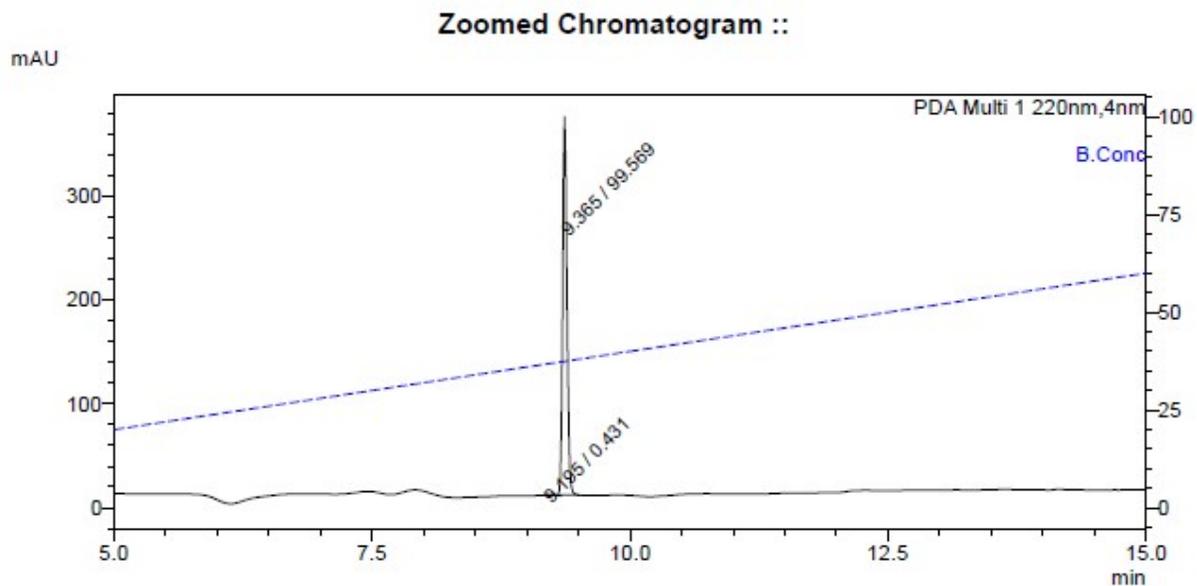**HR-MS**: Calculated for $C_{102}H_{147}F_6N_{21}O_{12}$; m/z: $[M+2H]^{2+}$ 987.58089, found 987.58163
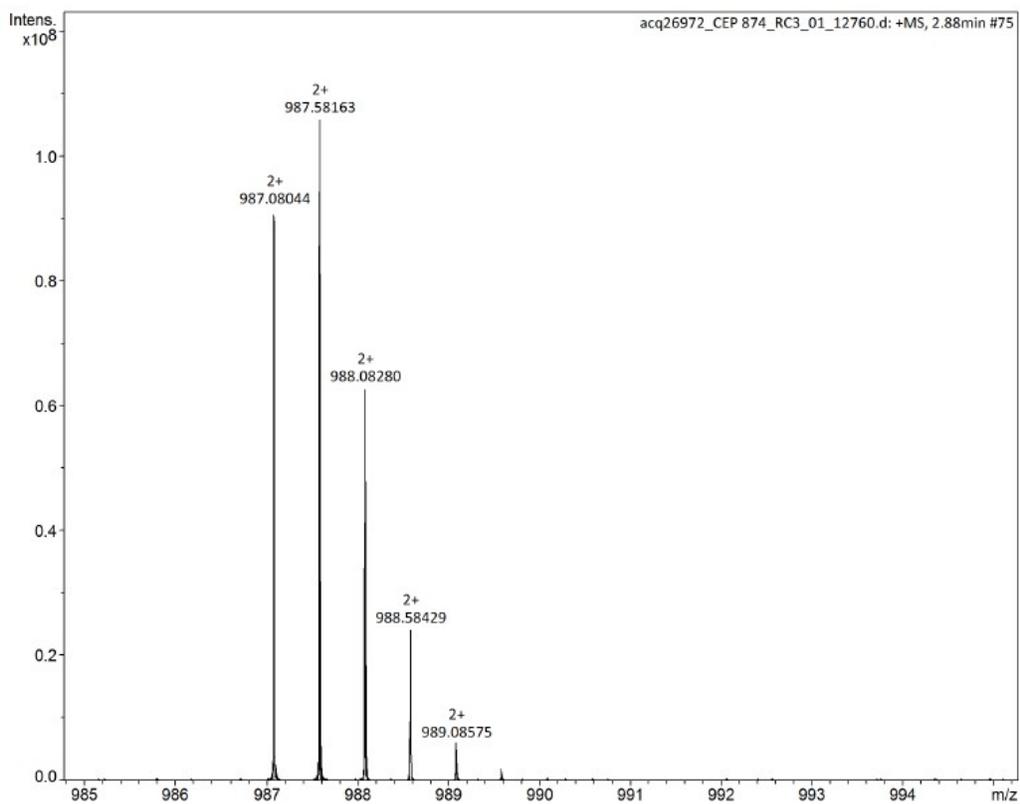
6K

Analyt. HPLC: Buffer A = 5% MeCN + 95% H_2O + 0.1% TFA. Buffer B = 95% MeCN + 5% H_2O + 0.1% TFA. Gradient: 0-60% B during 15 min. t_R = 9.11 min. Purity: 99.7%.
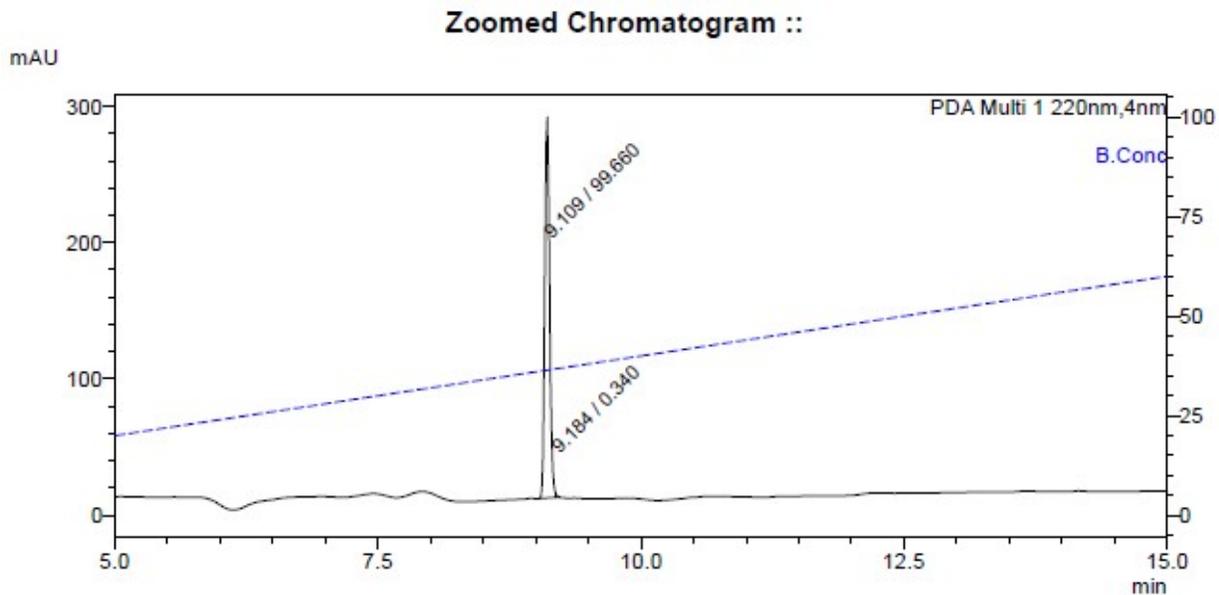

HR-MS: Calculated for $C_{102}H_{147}F_6N_{21}O_{12}$; m/z: $[M+2H]^{2+}$ 996.09434, found 996.10006