Supplementary Information

EDB-FN Targeted Peptide-Drug Conjugates for Use against Prostate Cancer

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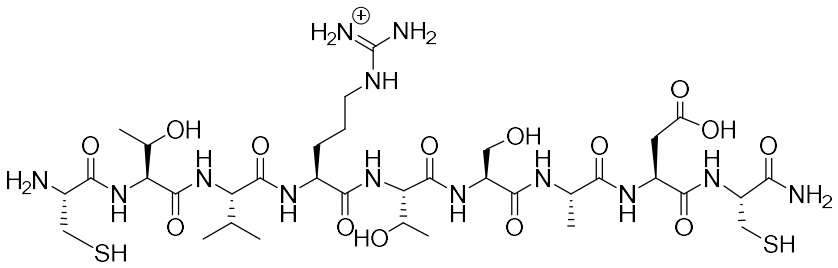
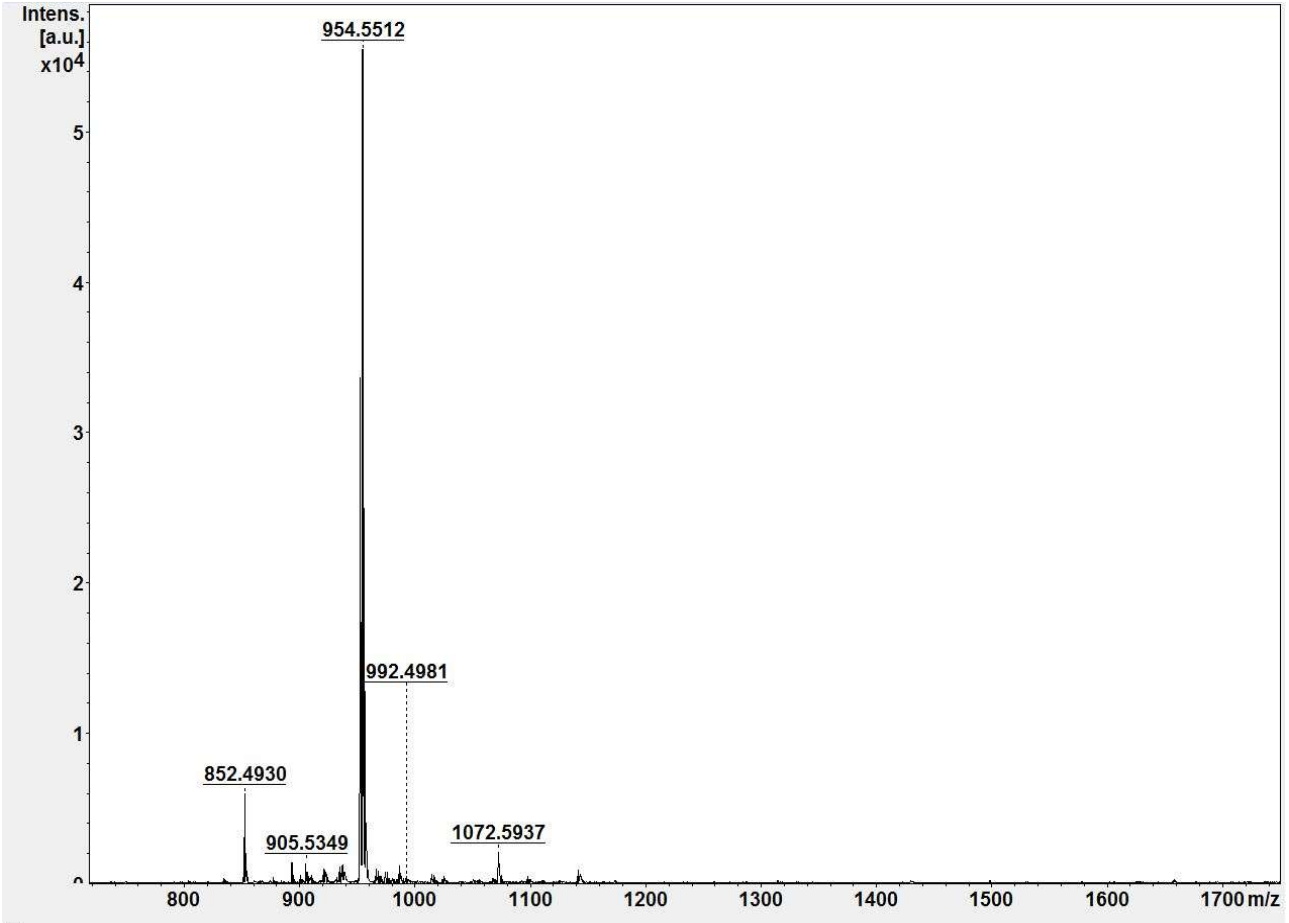
1. Mass spectra of synthesized compounds

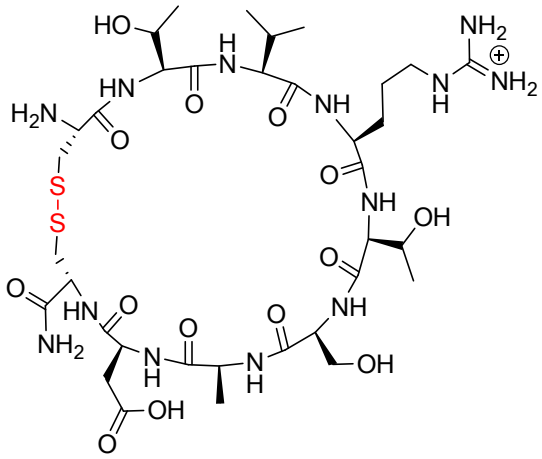
A: MALDI-TOF of linear peptide (CTVRTSADC)



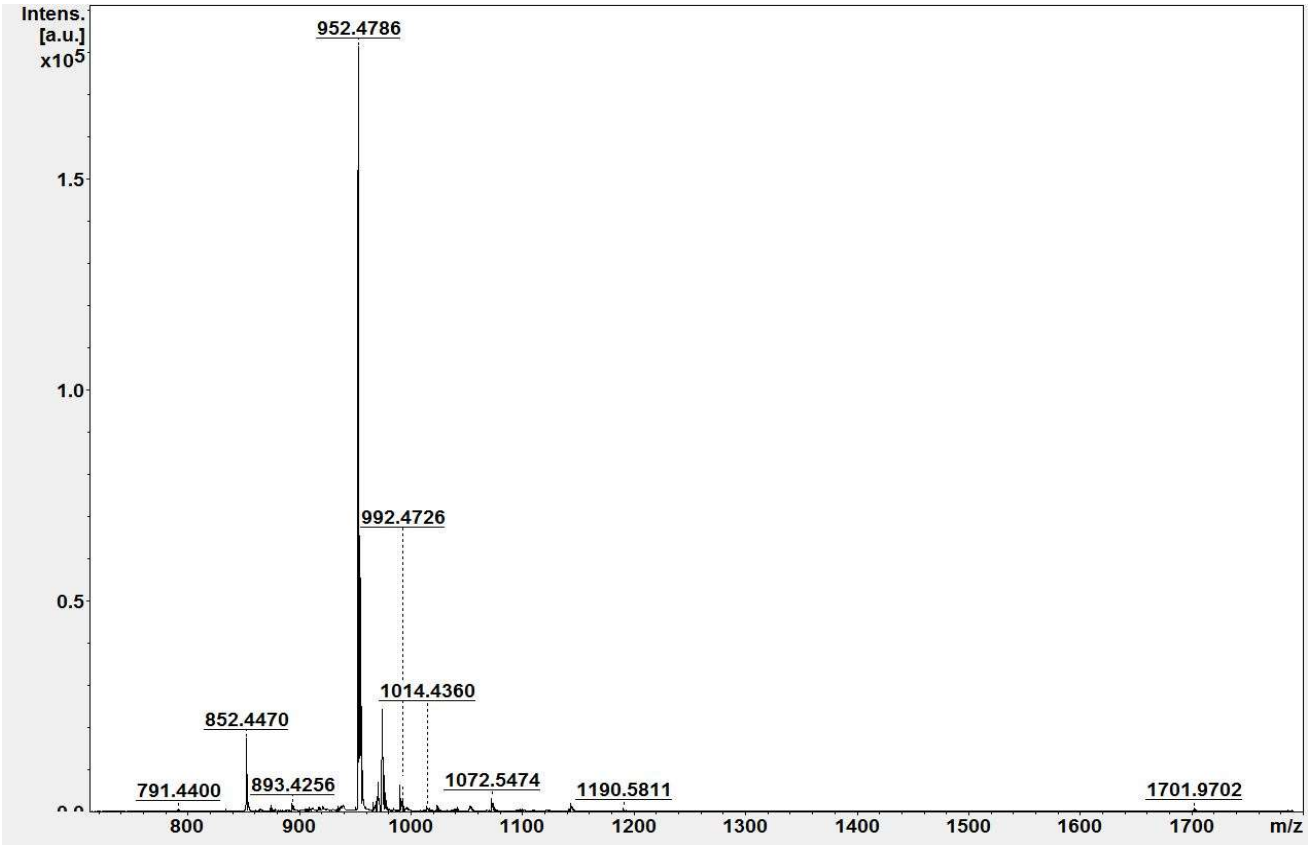
Exact Mass: 954.4132



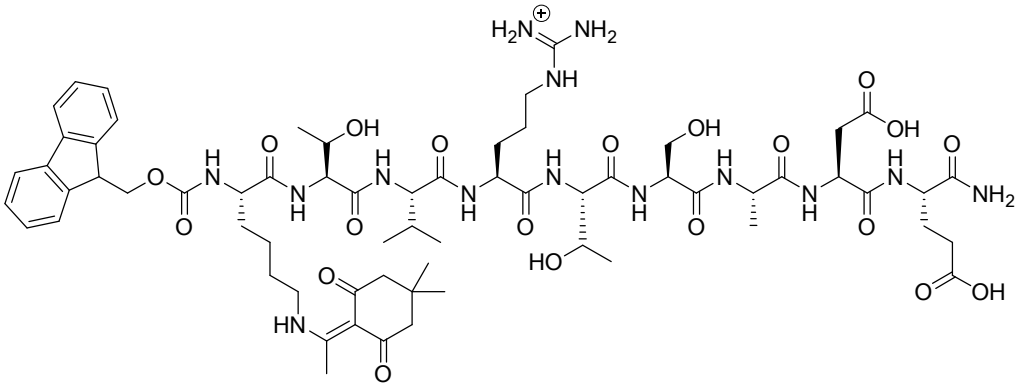
B: MALDI-TOF of peptide, **1** [CTVRTSADC] (Cyclized)



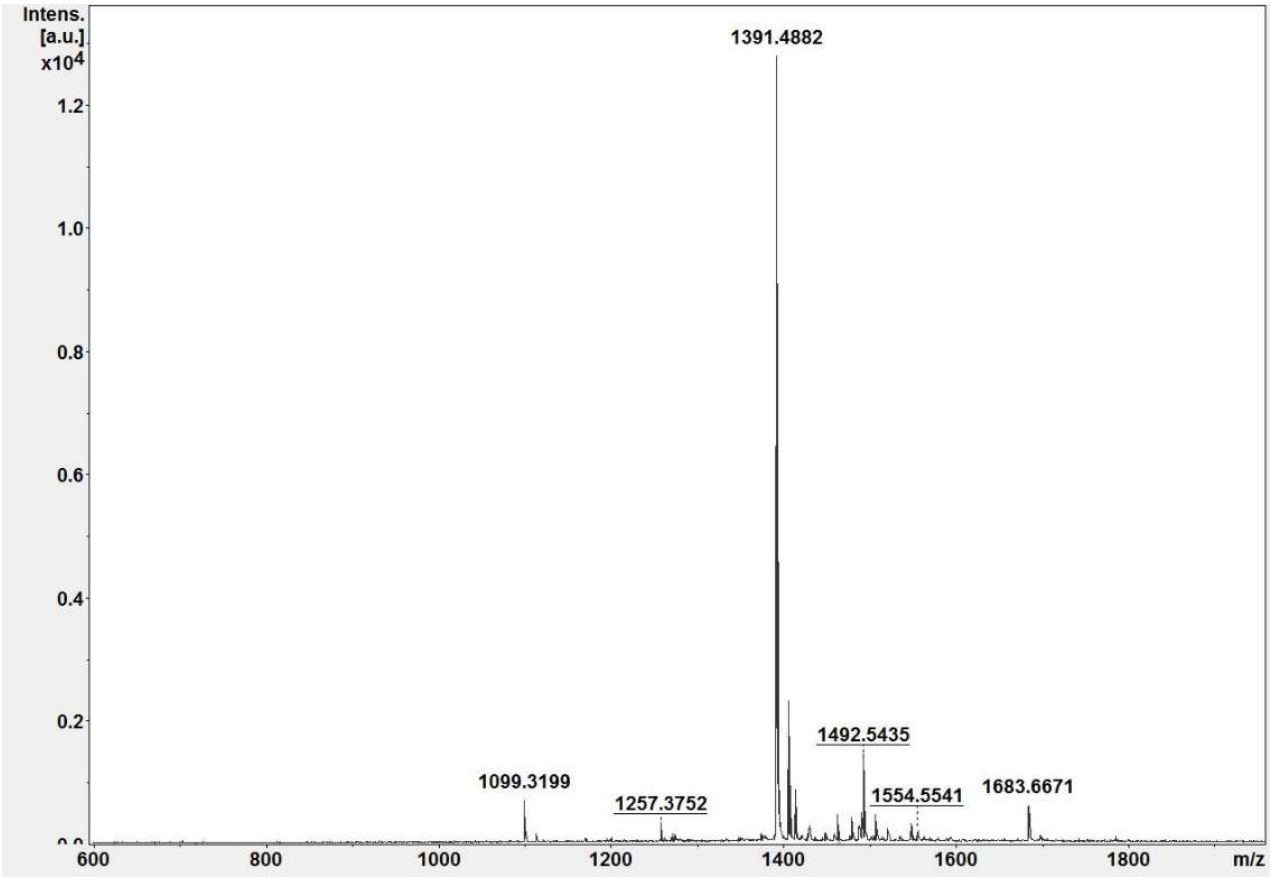
Exact Mass: 952.3975



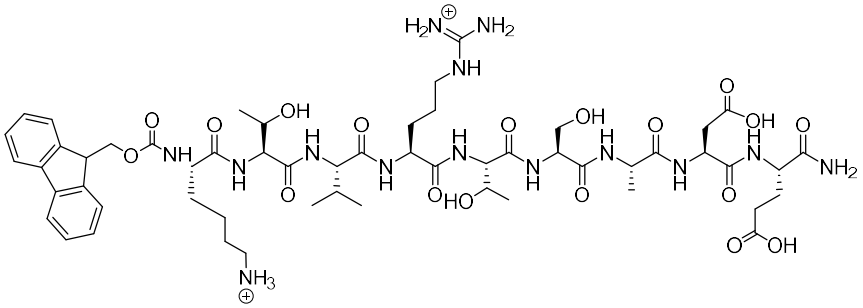
C: MALDI-TOF of intermediate peptide Fmoc-K(Dde)TVRTSADE



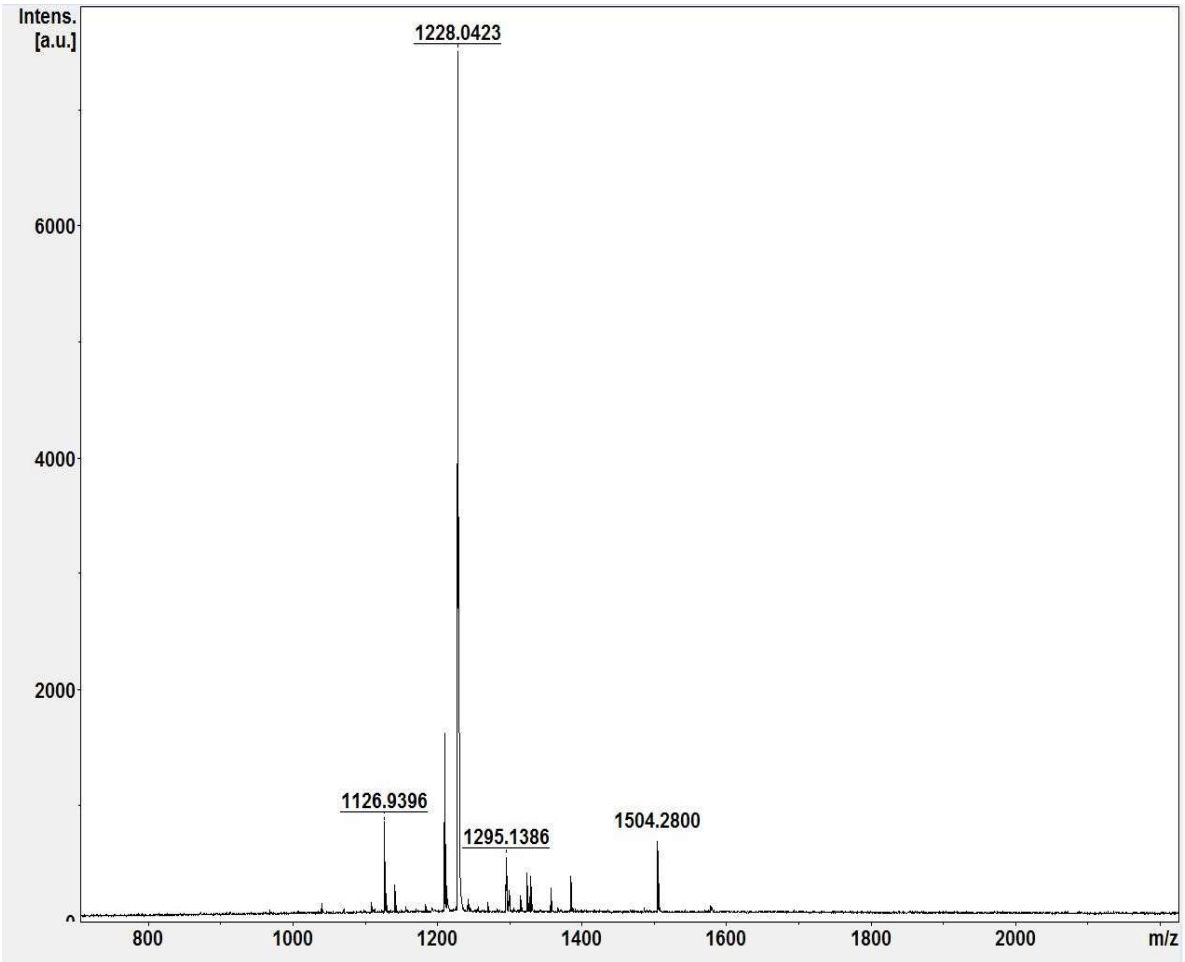
Exact Mass: 1391.6842



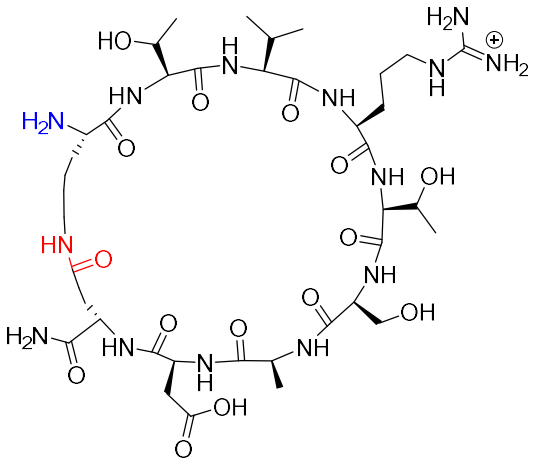
D: MALDI-TOF of intermediate peptide, Fmoc-KTVRTSADE



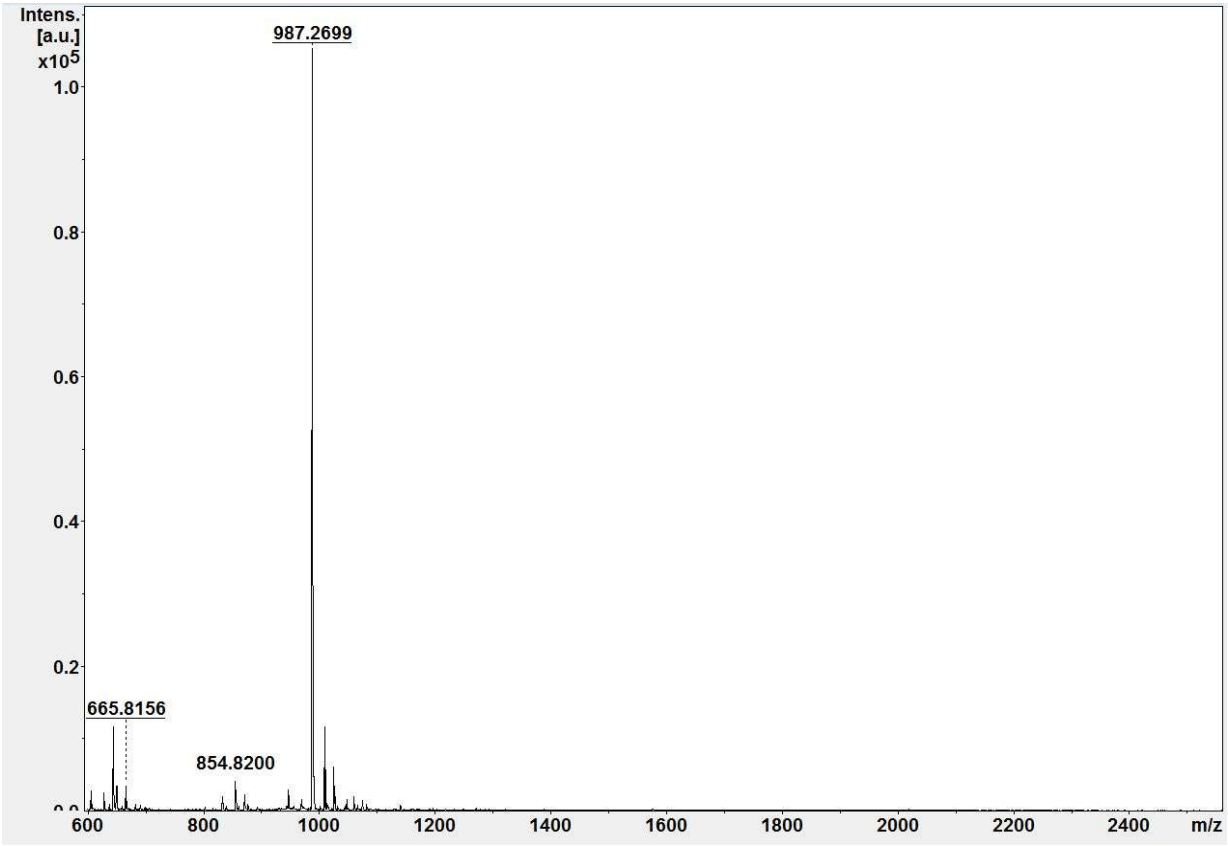
Exact Mass: 1228.6077



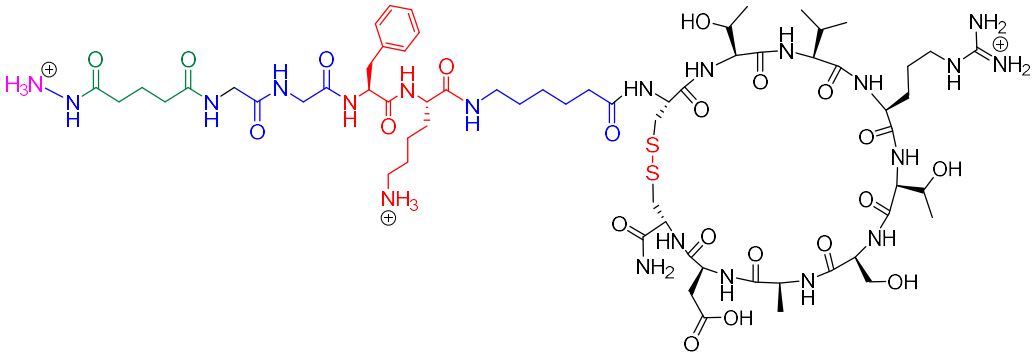
E: MALDI-TOF of peptide **8,** [KTVRTSADE] (cyclized)



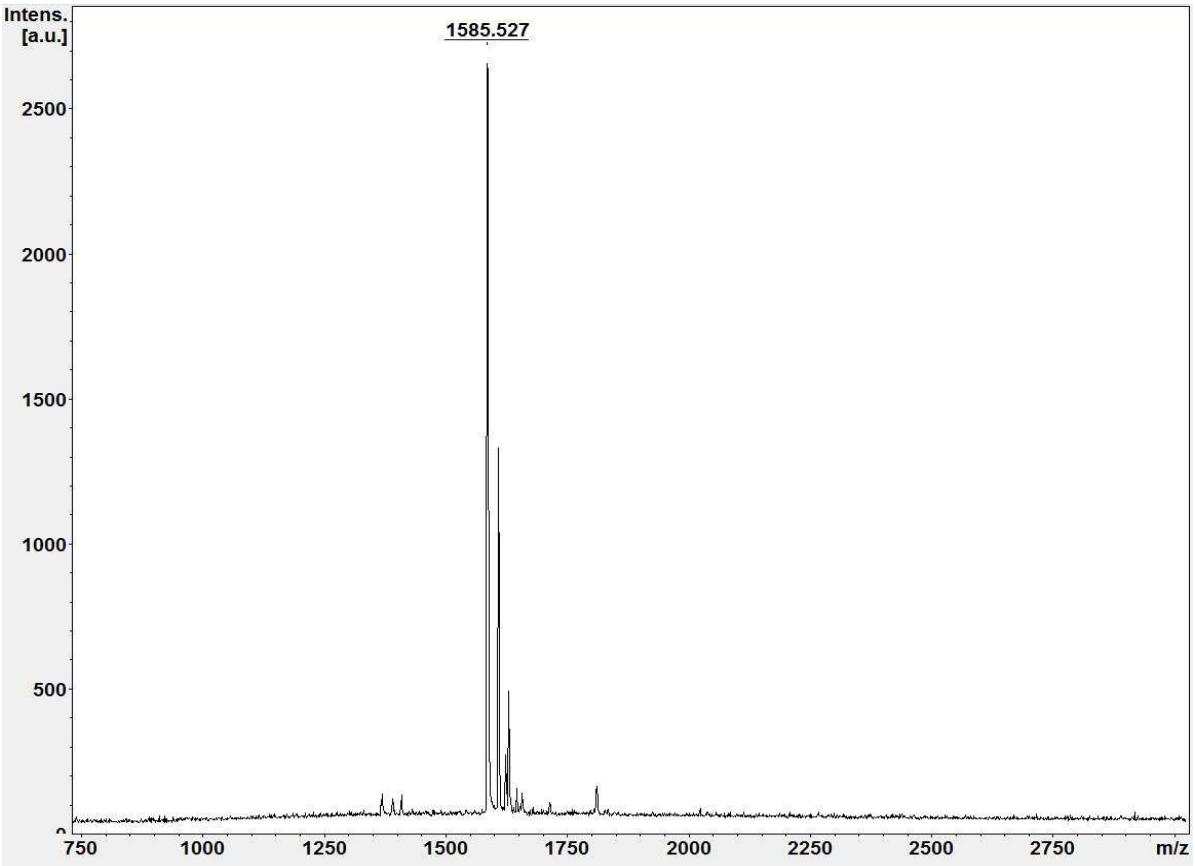
Exact Mass: 987.5218



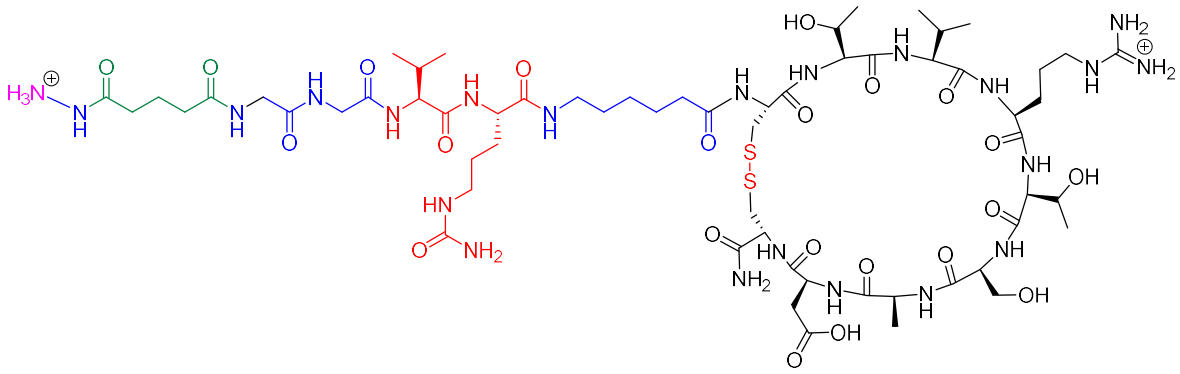
F: MALDI-TOF of peptide **5,** Hydrz-Glutrt-GG-FK-C_6-[CTVRTSADC]



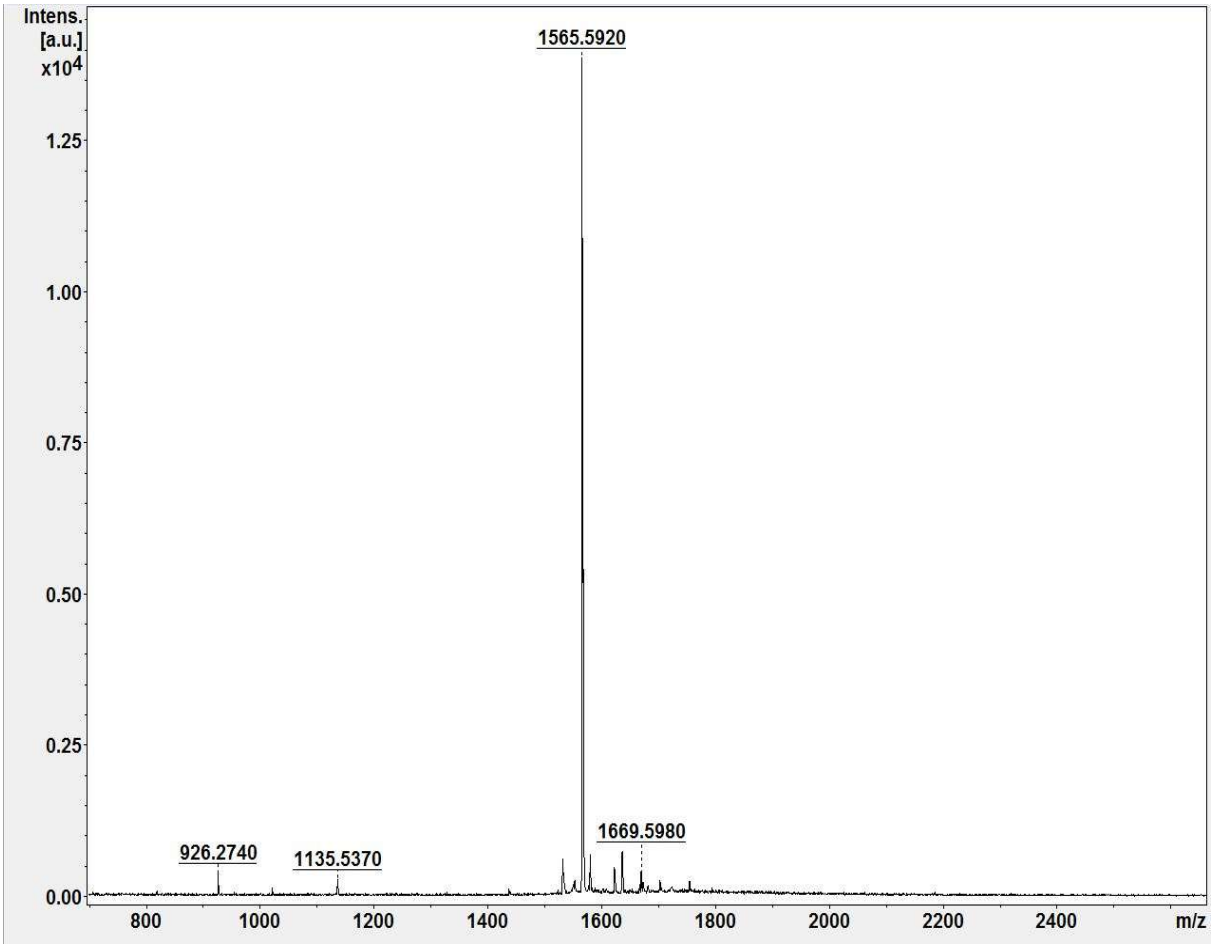
Exact Mass: 1584.7610



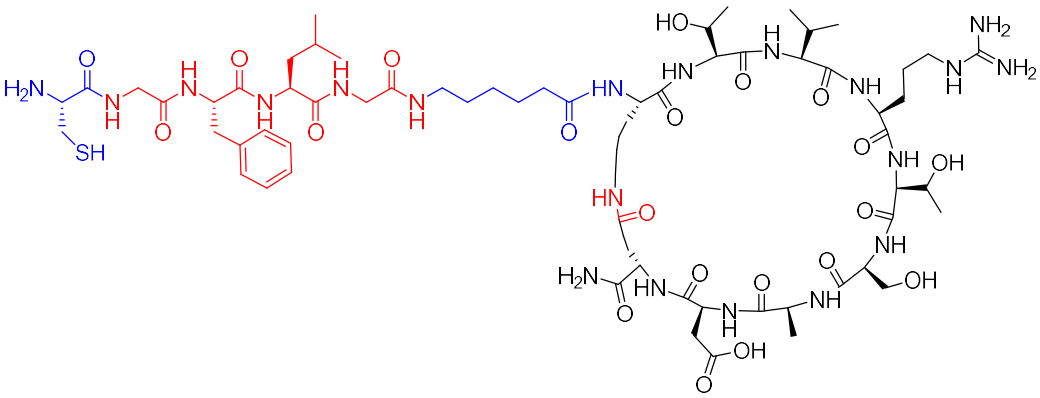
G: MALDI-TOF of peptide **6,** Hydrz-Glutrt-GG-VCit-C_6-[CTVRTSADC]



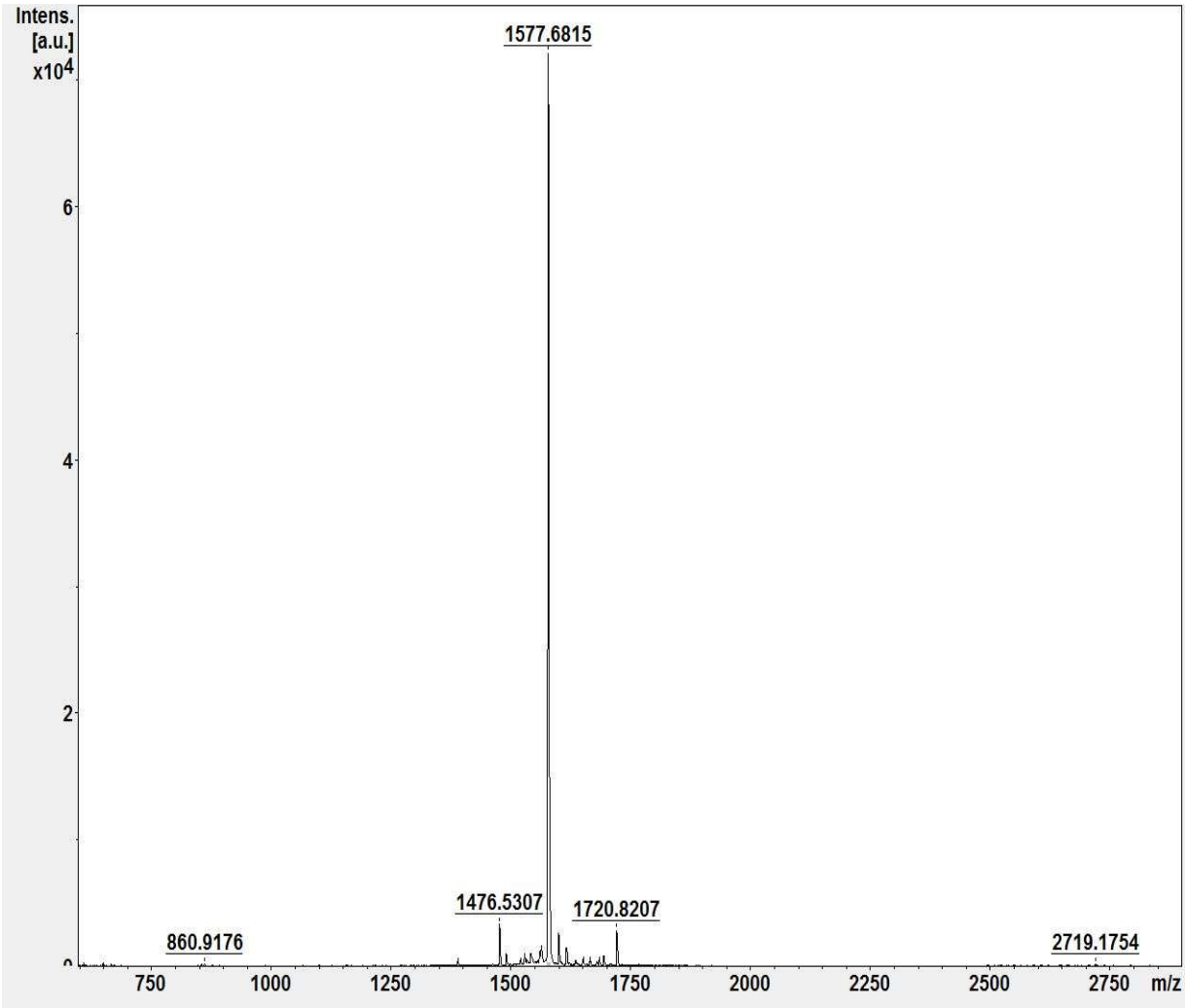
Exact Mass: 1564.7439



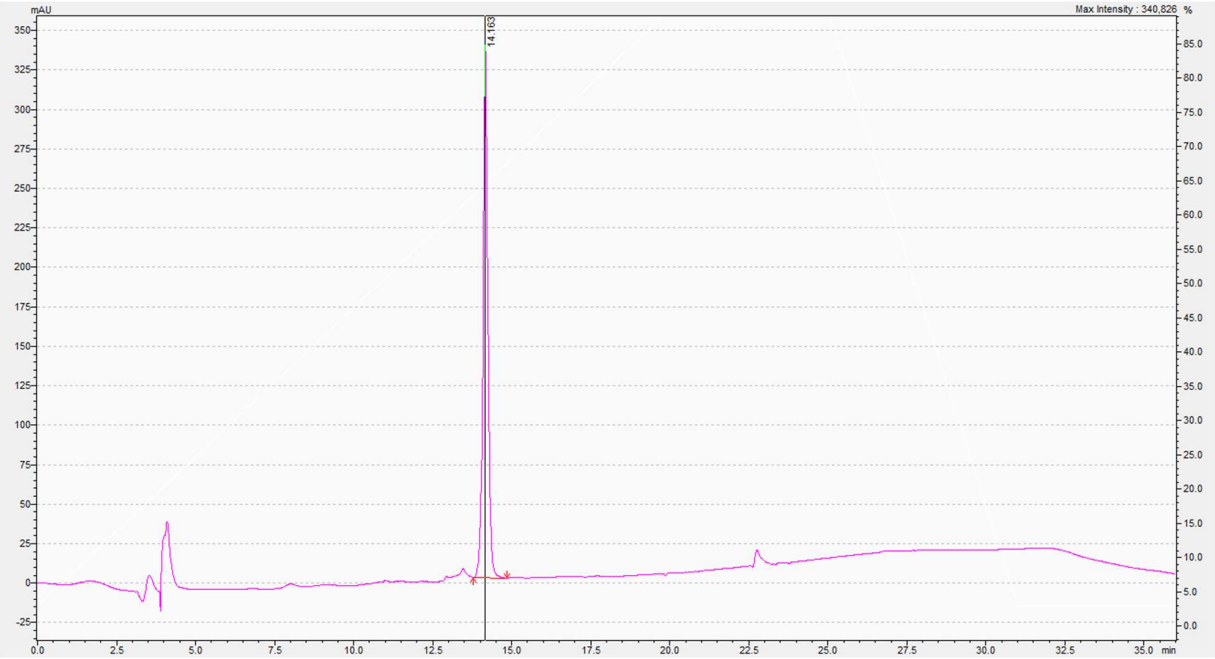
H: MALDI-TOF of peptide **9**, C-GFLC-C_6-[KTVRTSADE]



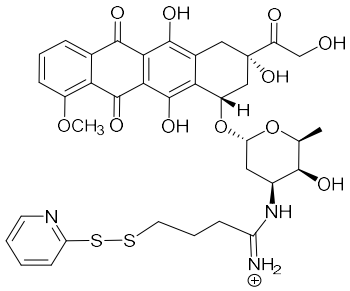
Exact Mass: 1577.8110



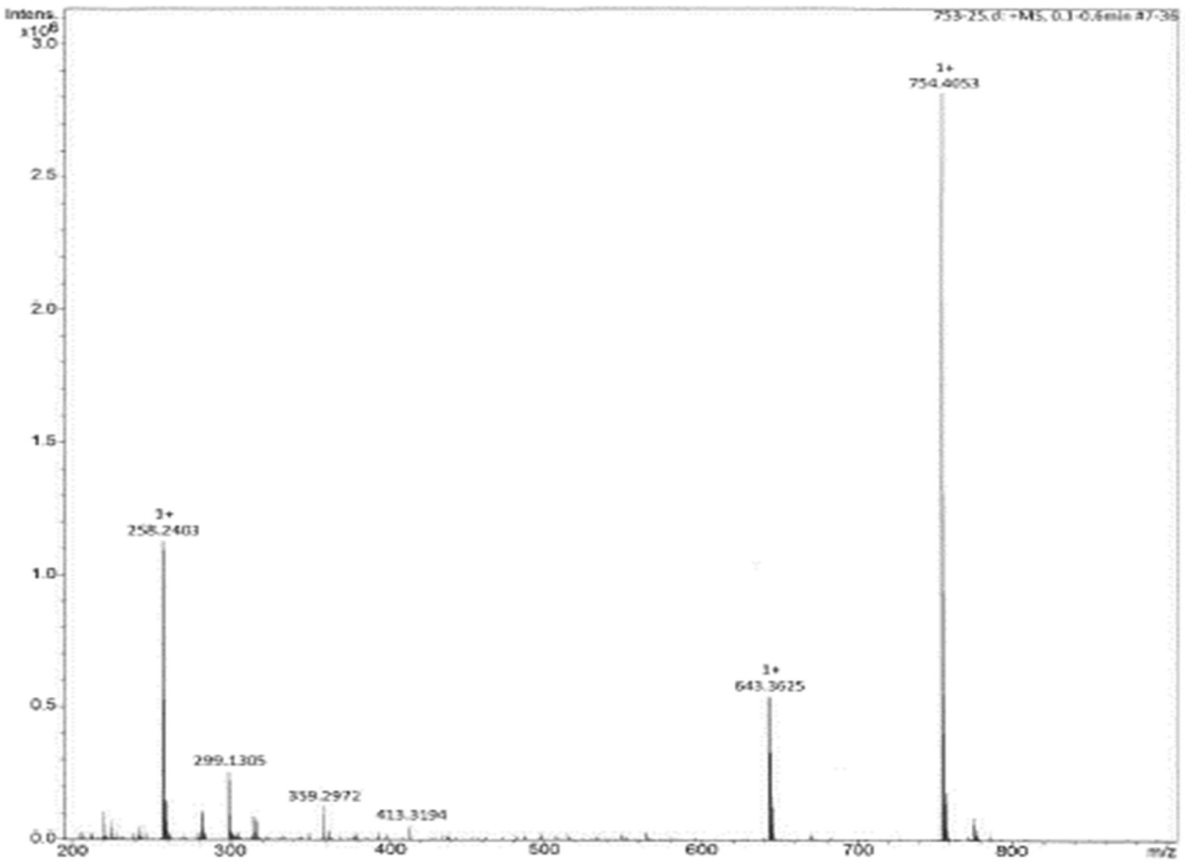
I: Analytical HPLC profile of peptide **9**, C-GFLC-C_6-[KTVRTSADE]



J: Analytical HPLC profile of compound **10**, Dox-s-s-pyridine



Exact Mass: 754.2099



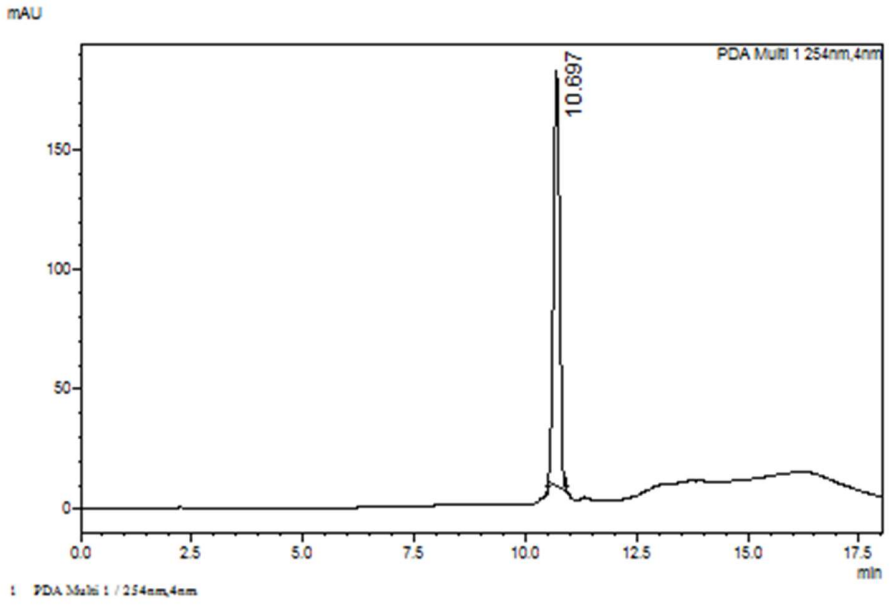
SHIMADZU LabSolutions

Analysis Report

<Sample Information>

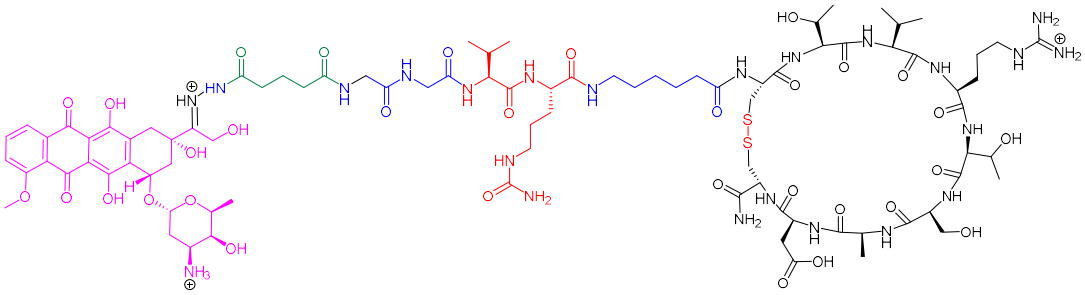
Sample Name	: 753-25-1		
Sample ID	: 753-25-1		
Data Filename	: 753-25-2.lcd		
Method Filename	: 645-1.lcm		
Batch Filename	:		
Vial #	: 1-2	Sample Type	: Unknown
Injection Volume	: 10 uL		
Date Acquired	: 1/25/2017 7:42:11 AM	Acquired by	: DARWISH
Date Processed	: 1/25/2017 8:00:12 AM	Processed by	: DARWISH

<Chromatogram>

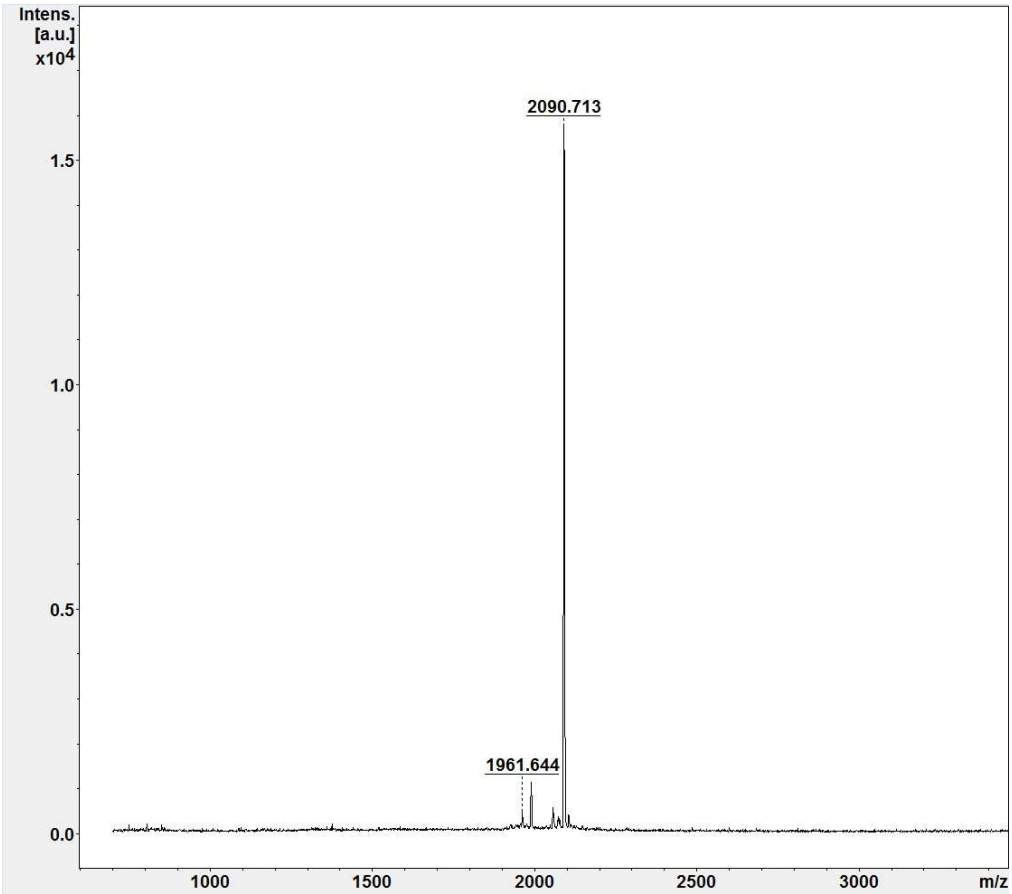


1 PDA Multi 1 / 254nm,4nm

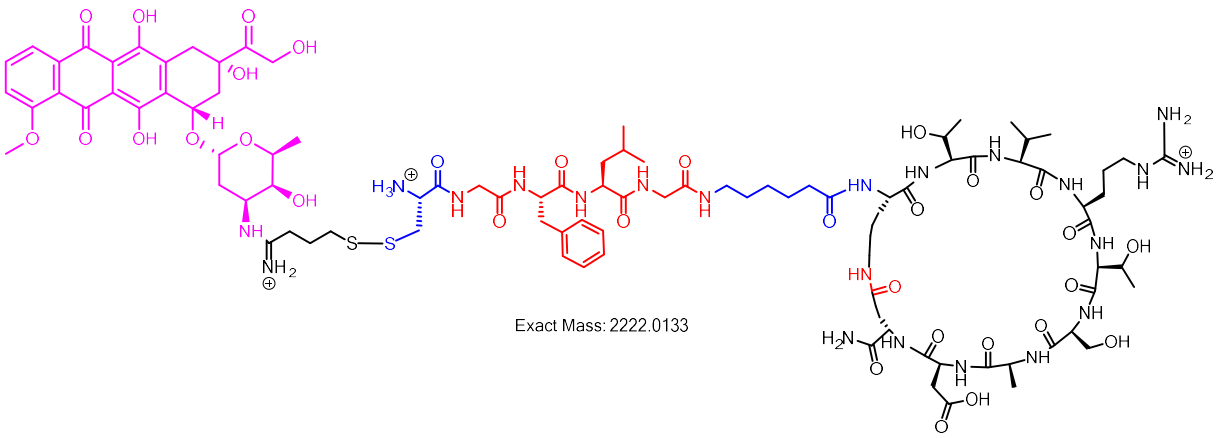
K: MALDI-TOF of peptide conjugate**12**, Dox-hydrz-Glutrt–GG–VCit–C_6-[CTVRTSADC

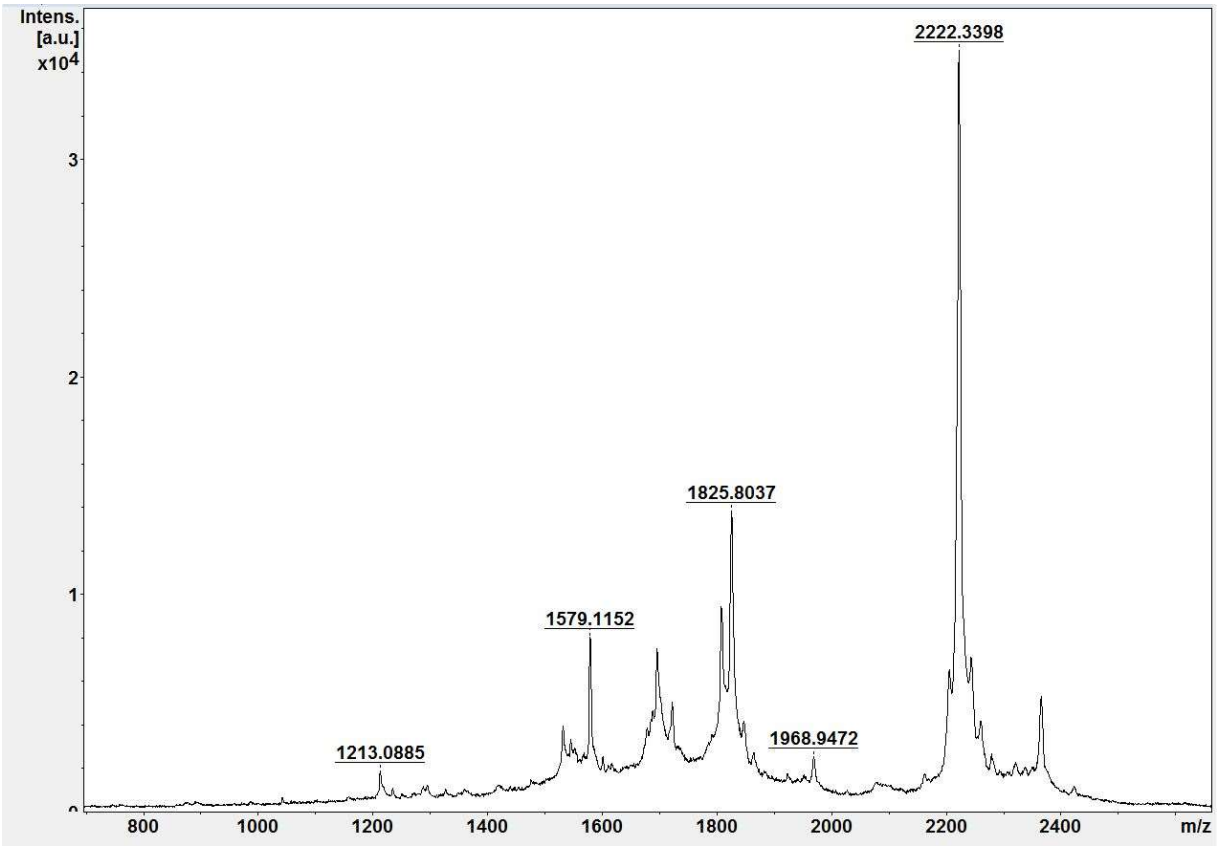


Exact Mass: 2090.9147

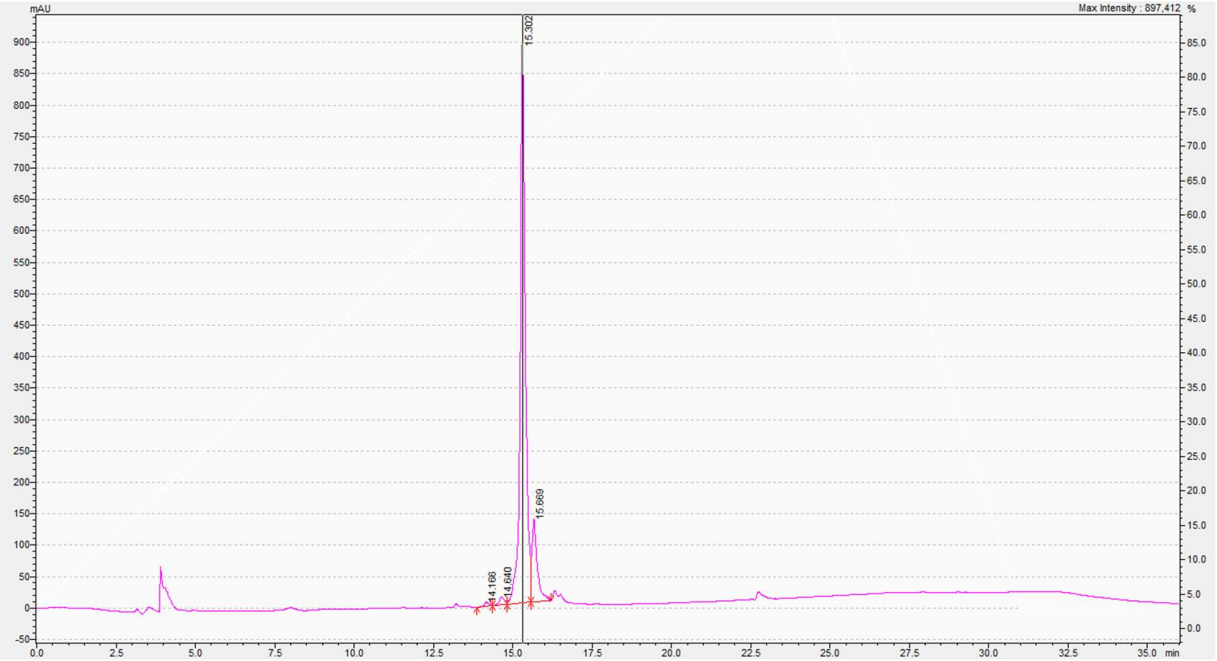


L: MALDI-TOF of peptide conjugate**13**, Dox-s-s-CGFLG-C_6-[KTVRTSADE]

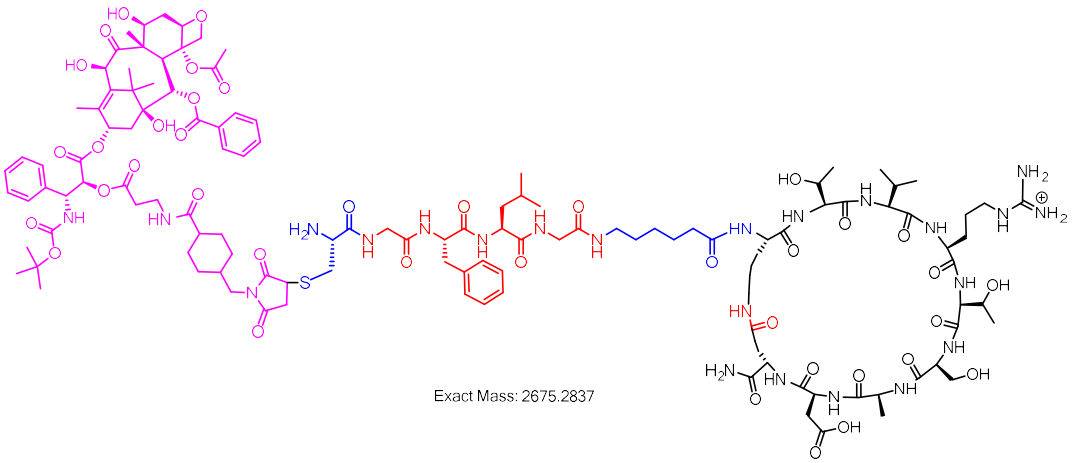


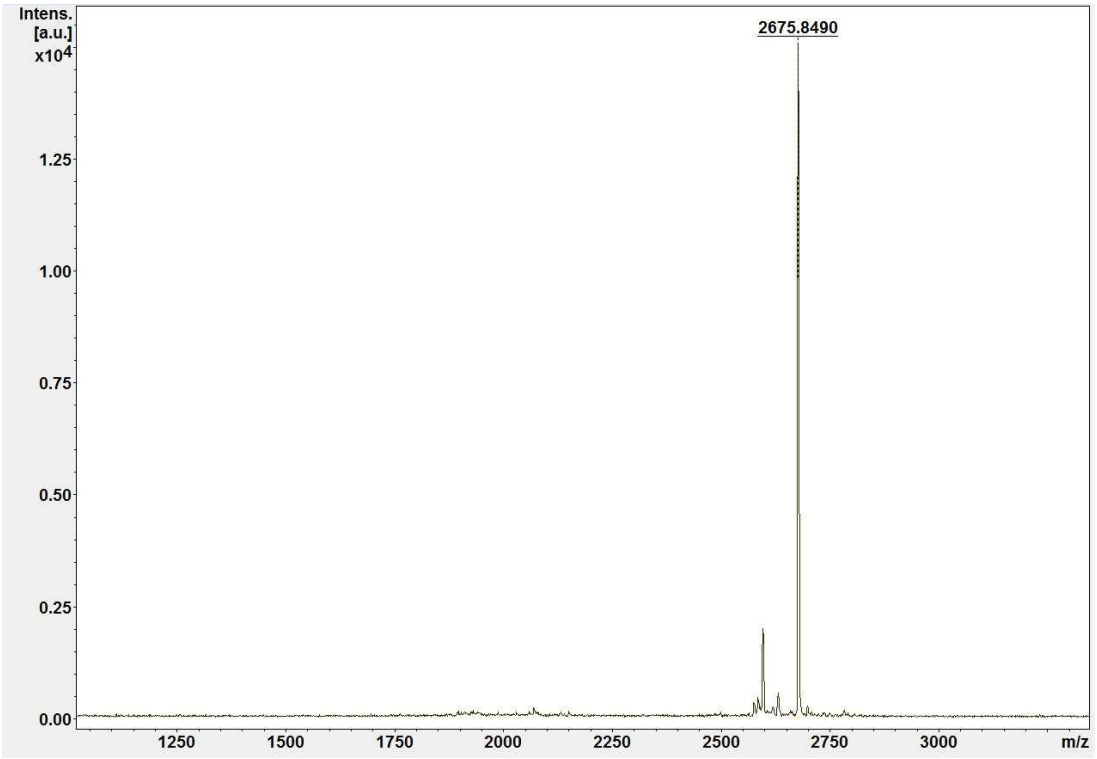


M: Analytical HPLC profile of peptide **13**, Dox-s-s-CGFLG-C_6-[KTVRTSADE]

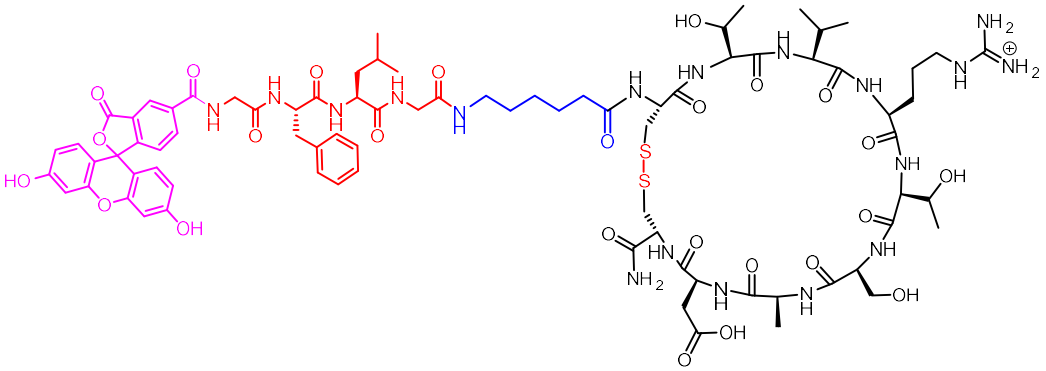


N: MALDI-TOF of peptide conjugate **14**, Doce-βA-thioether-CGFLG-C_6-[KTVRTSADE]

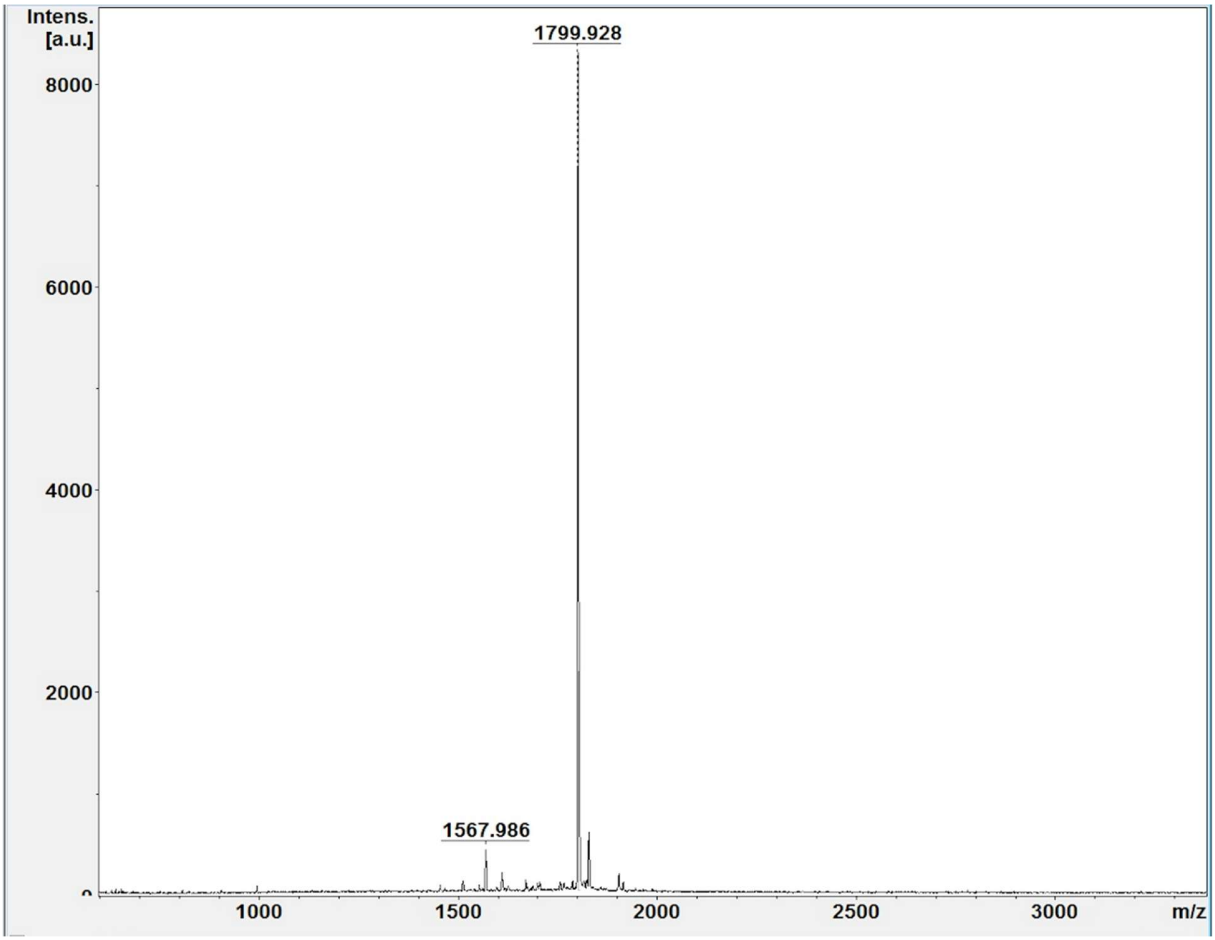




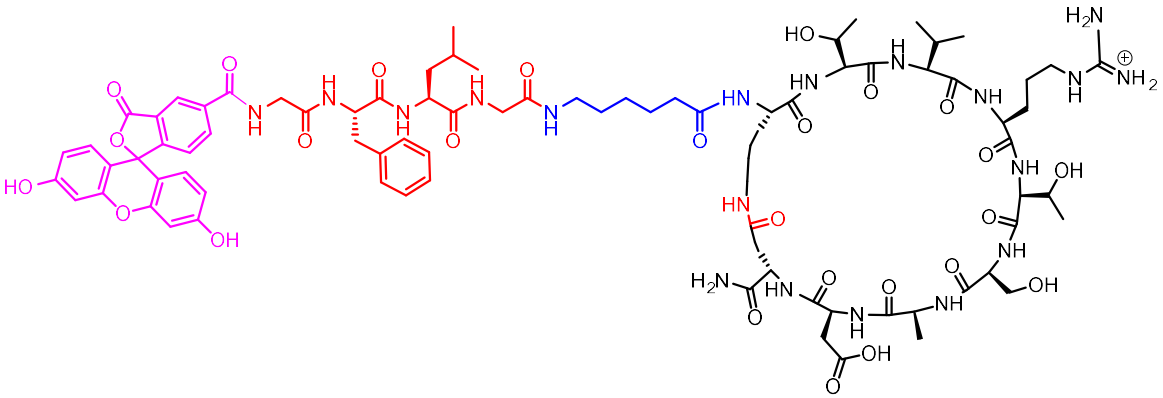
O: MALDI-TOF of peptide **17**, CFDI-GFLG-C_6-[CTVRTSADC]



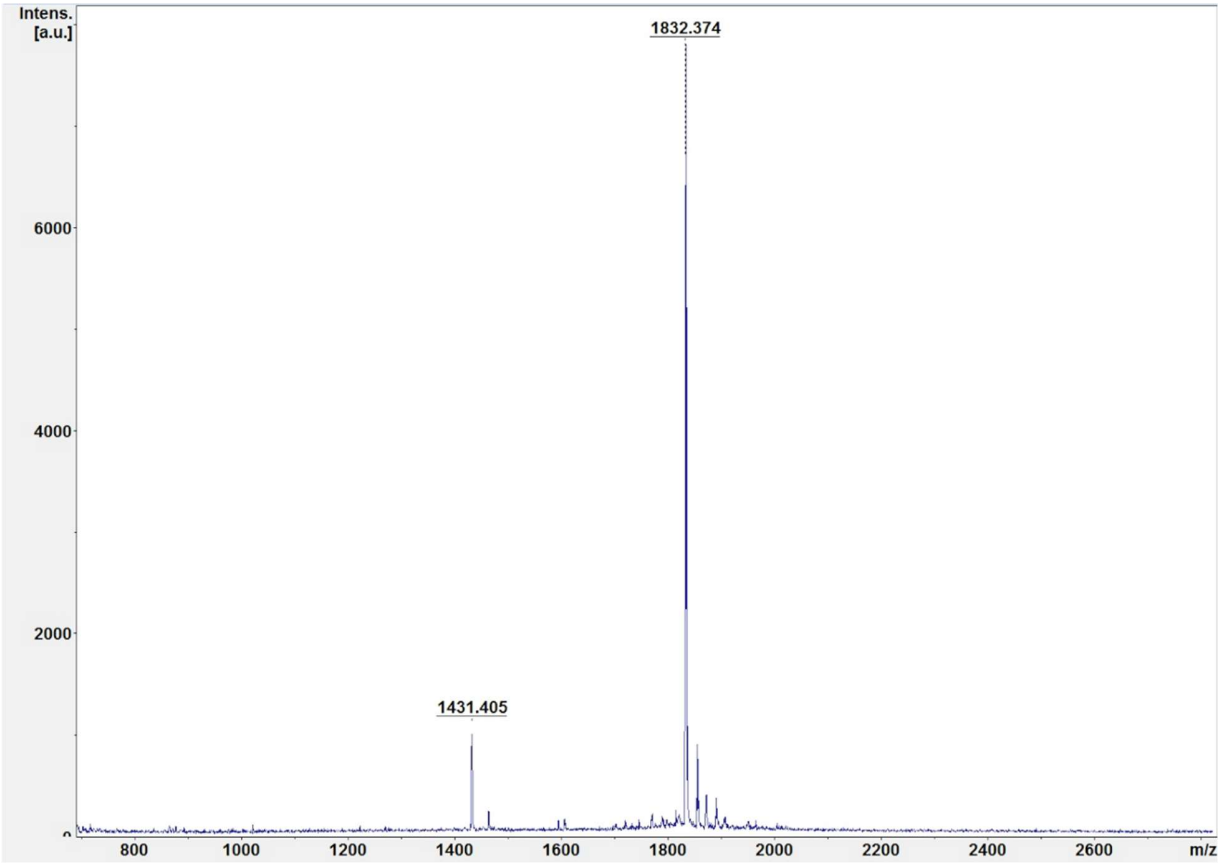
Exact Mass: 1797.7247



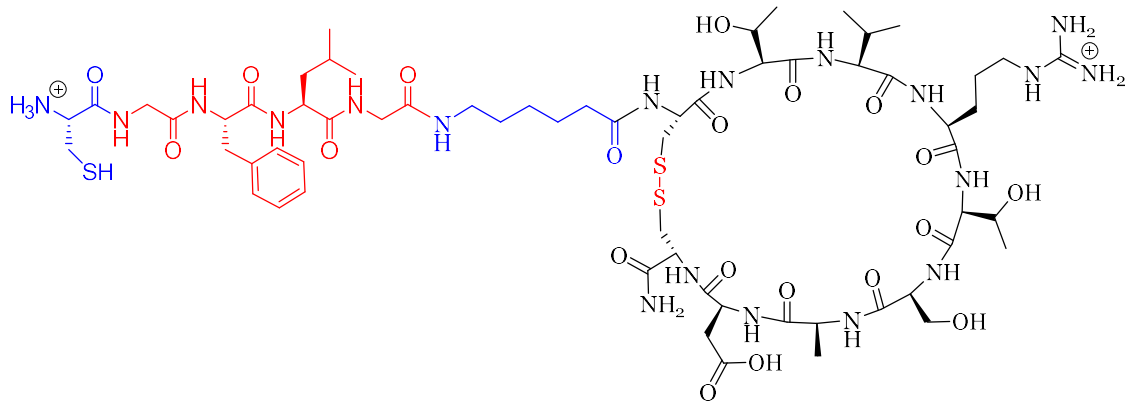
P: MALDI-TOF of peptide **18**, CFDI-GFLG-C_6-[KTVRTSADE]



Exact Mass: 1832.8490



Q: MALDI-TOF of peptide **19**, C-GFLC-C_6-[CTVRTSADC



Exact Mass: 1543.6934

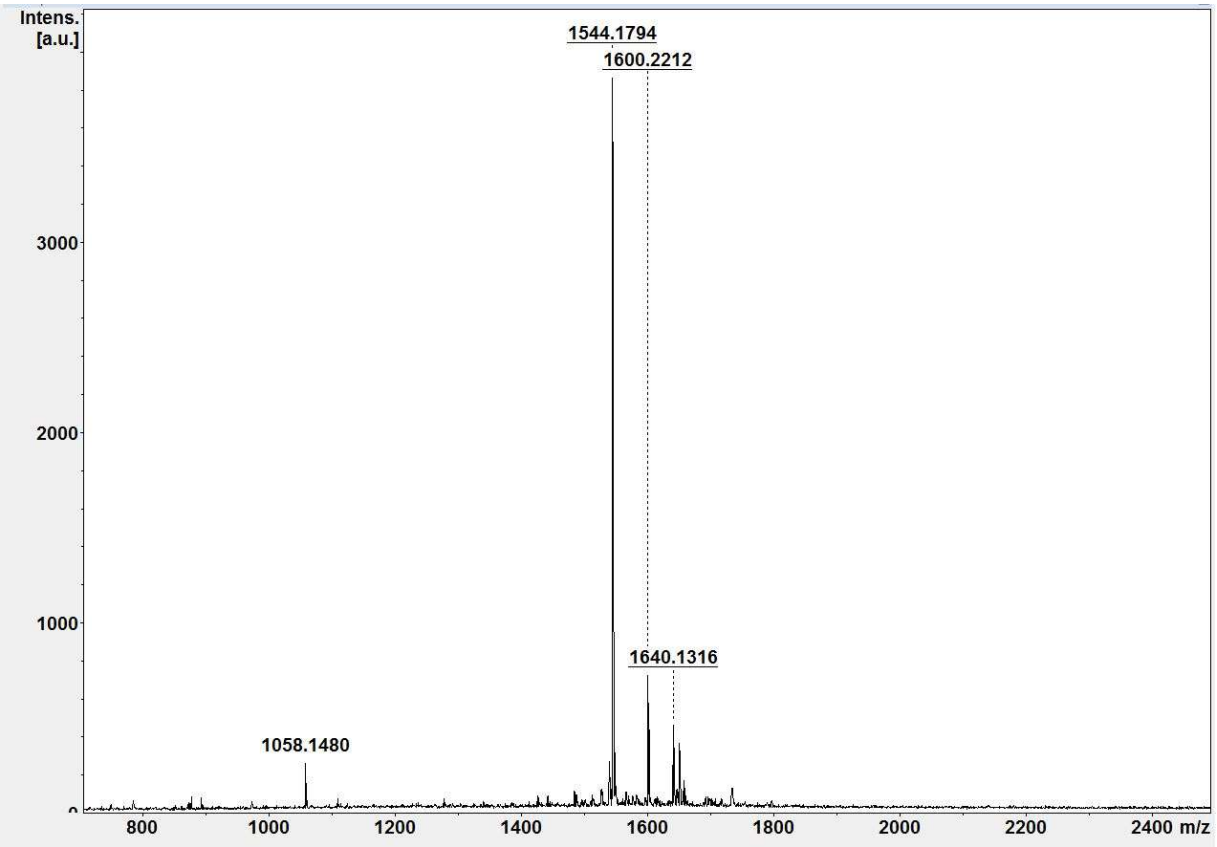
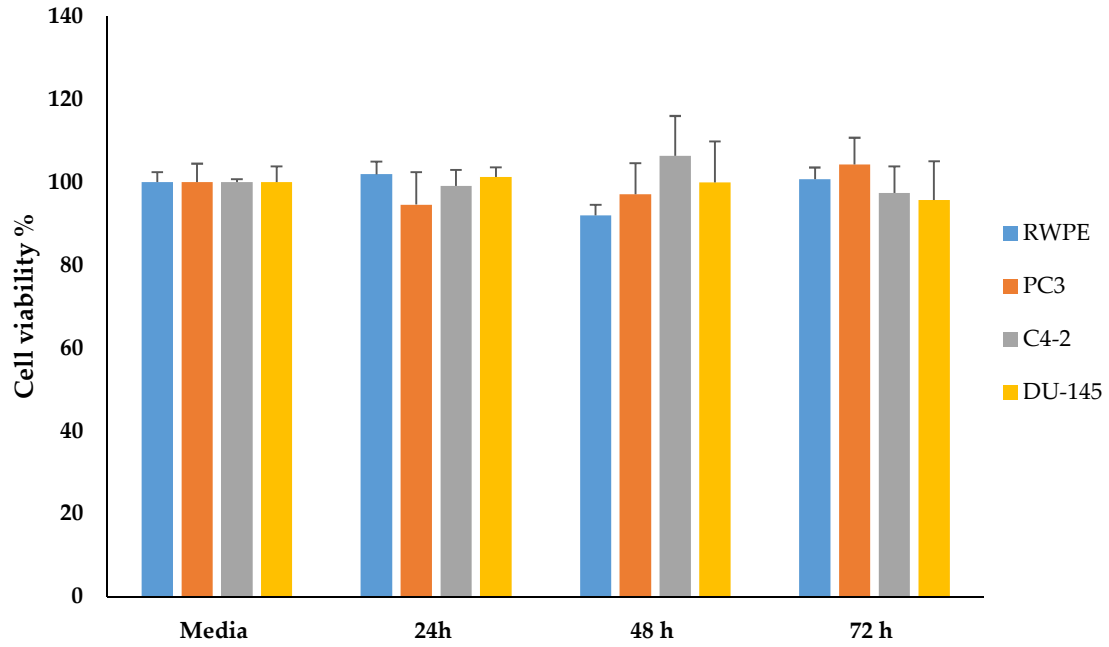
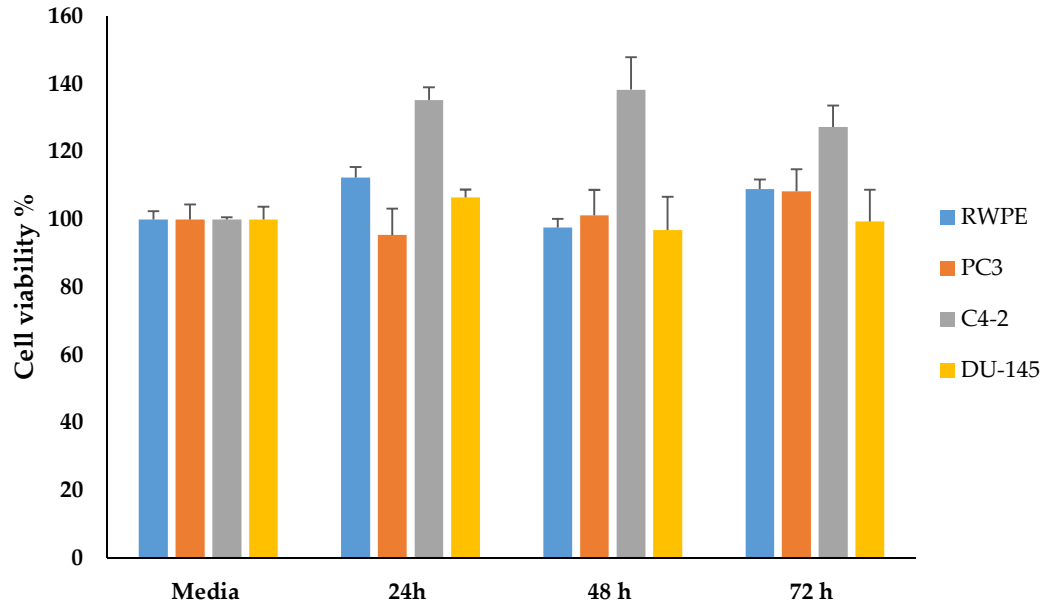


Figure S1. Analytical HPLC chromatogram for doxorubicin alone with the absorbance detection at 214 nm (top) and 490 nm (bottom).

(a)


140
120
100
80
60
40
20
0
Cell viability %
Media
24h
48 h
72 h
RWPE
PC3
C4-2
DU-145

(b)


160
140
120
100
80
60
40
20
0
Cell viability %
Media
24h
48 h
72 h
RWPE
PC3
C4-2
DU-145

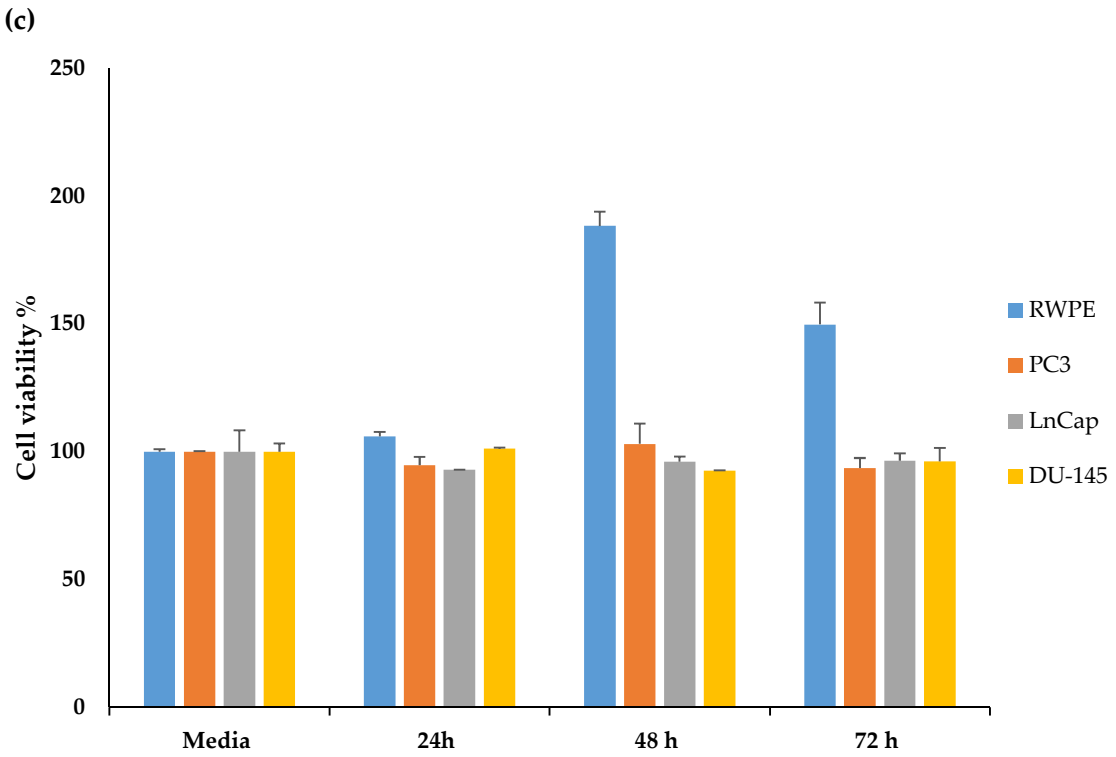


Figure S2. Cytotoxicity of a) peptide **5** (5 µM); b) peptide **6** (5 µM); c) peptide **9** (5 µM) after 24, 48, and 72 h incubation with RWPE-1, PC3, C4-2, and DU-145 cell lines.