

Supporting Information

Synthesis and pharmaceutical characterizations of site-specific mycophenolic acid-modified *Xenopus*

Glucagon-like Peptide-1 analogs

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Characterization of 2a-i	S2-S10
General synthesis route of peptide backbones (Scheme S1).....	S11
Characterization of 3a-d	S12-S15

Supporting Information

HPLC conditions (Agilent technologies 1260 infinity)

Column: Thermo C18 reversed-phase column (5 μm , 150 mm \times 4.6 mm);

Mobile phase: mobile phase A: water with 0.1% formic acid, mobile phase B: methanol;

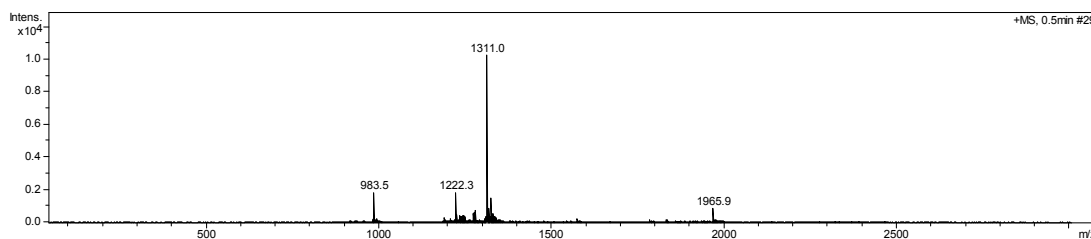
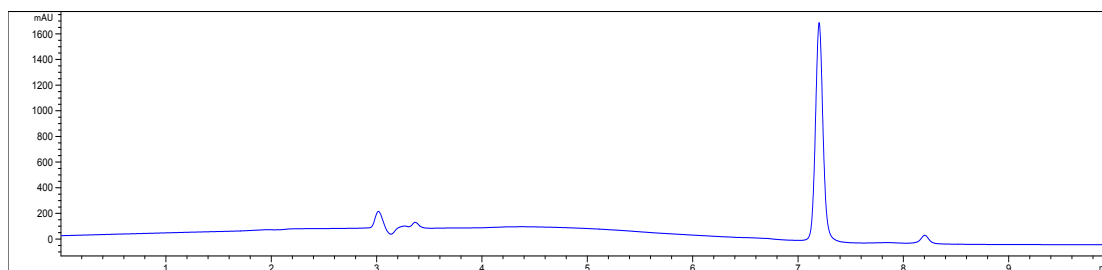
0-5 min, 50-90% B; 5-9 min, 90-90% B; 9-10 min, 90-50% B;

Wavelength: 214 nm;

Rate: 1 mL/min;

Temperature: 25 $^{\circ}\text{C}$.

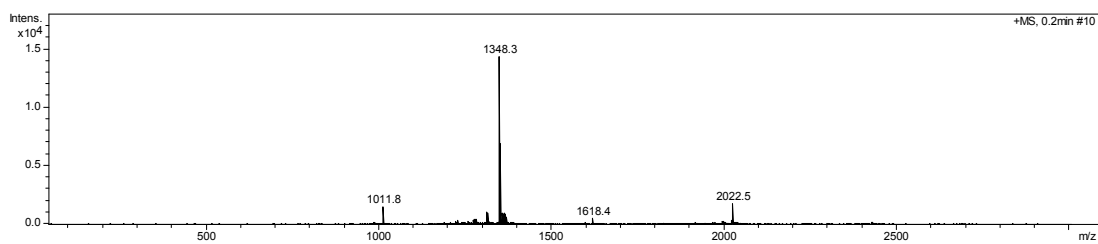
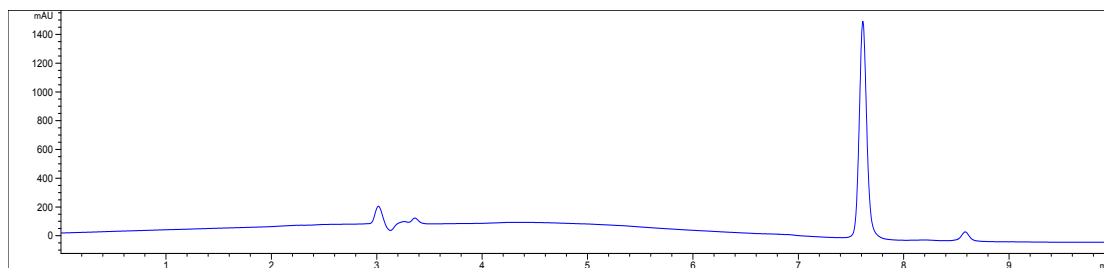
2a



(m/z)calad	(m/z)found
$[\text{m}+3\text{H}]^{3+}$ 1311.6	$[\text{m}+3\text{H}]^{3+}$ 1311.0
$[\text{m}+4\text{H}]^{4+}$ 984.0	$[\text{m}+4\text{H}]^{4+}$ 983.5

Supporting Information

2b



(m/z)calad

(m/z)found

[m+3H]³⁺ 1349.4

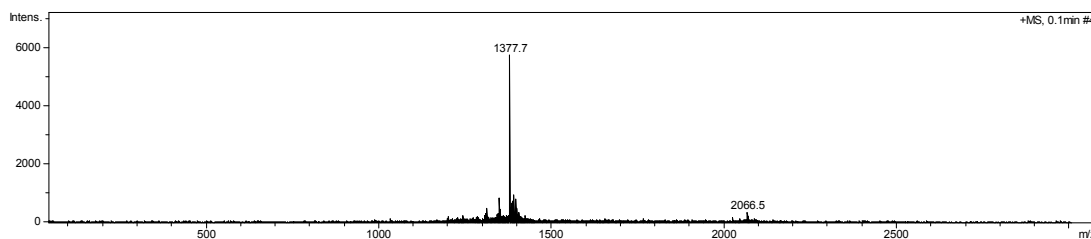
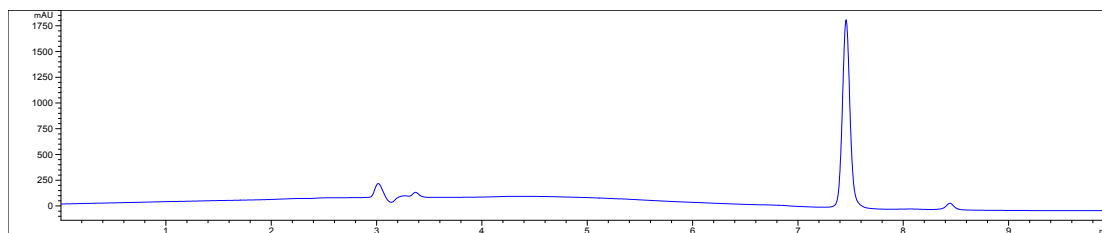
[m+3H]³⁺ 1348.3

[m+4H]⁴⁺ 1012.3

[m+4H]⁴⁺ 1011.8

Supporting Information

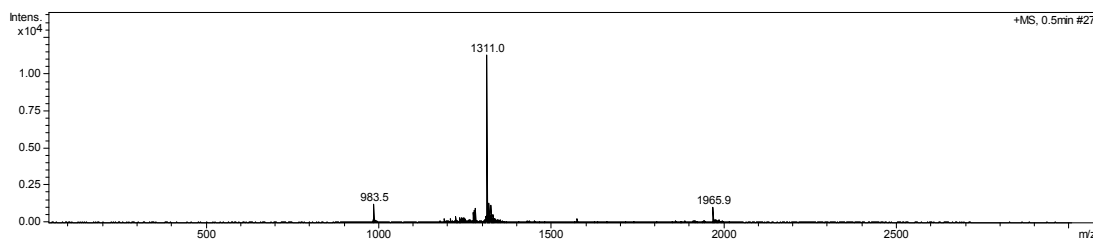
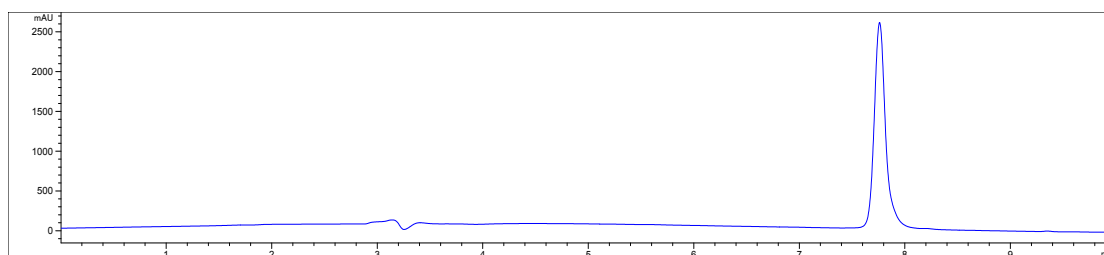
2c



(m/z)calad	(m/z)found
$[m+2H]^{2+}$ 2065.6	$[m+2H]^{2+}$ 2066.5
$[m+3H]^{3+}$ 1377.4	$[m+3H]^{3+}$ 1377.7

Supporting Information

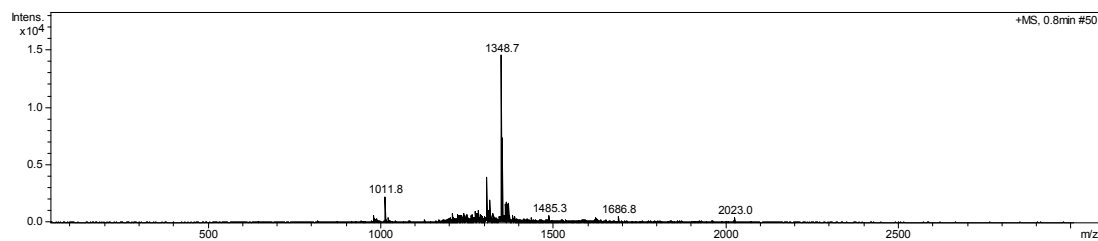
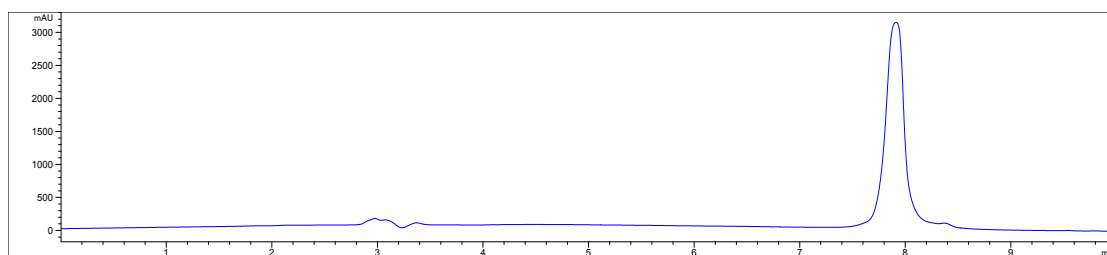
2d



(m/z)calad	(m/z)found
[m+3H] ³⁺ 1311.6	[m+3H] ³⁺ 1311.0
[m+4H] ⁴⁺ 984.0	[m+4H] ⁴⁺ 983.5

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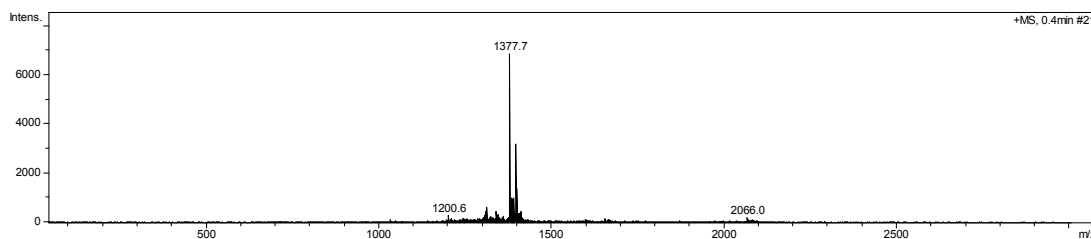
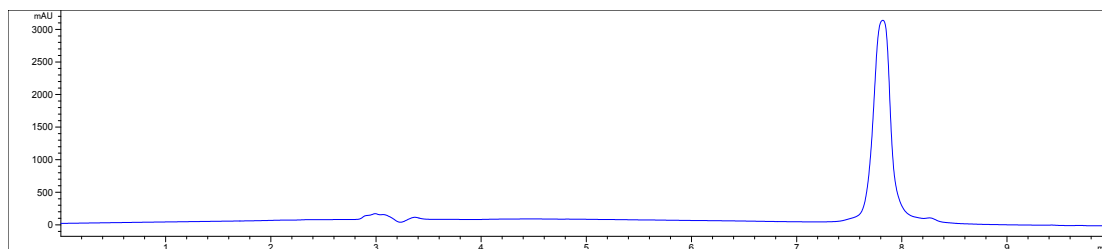
2e



(m/z)calad	(m/z)found
[m+3H] ³⁺ 1349.4	[m+3H] ³⁺ 1348.7
[m+4H] ⁴⁺ 1012.3	[m+4H] ⁴⁺ 1011.8

Supporting Information

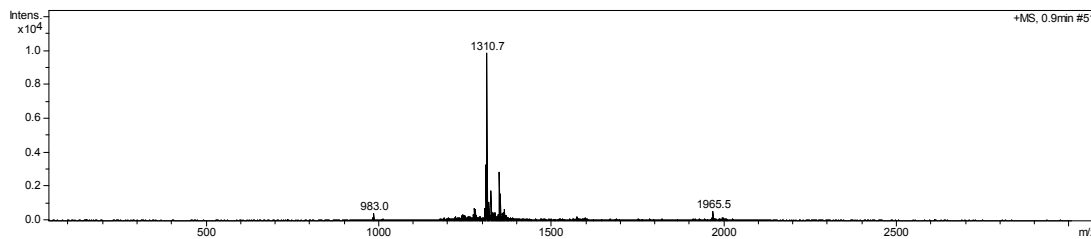
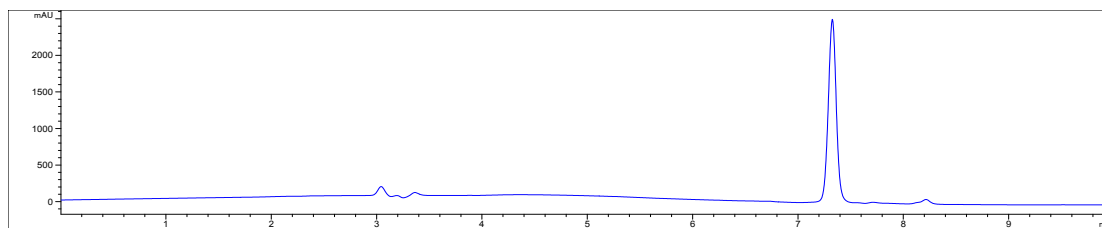
2f



(m/z)calad	(m/z)found
[m+2H] ²⁺ 2065.6	[m+2H] ²⁺ 2066.0
[m+3H] ³⁺ 1377.4	[m+3H] ³⁺ 1377.7

Supporting Information

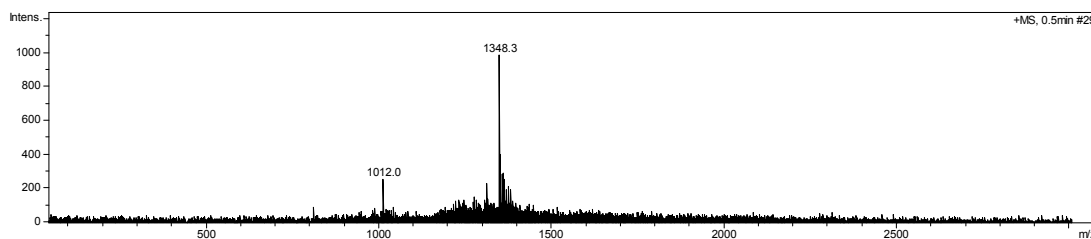
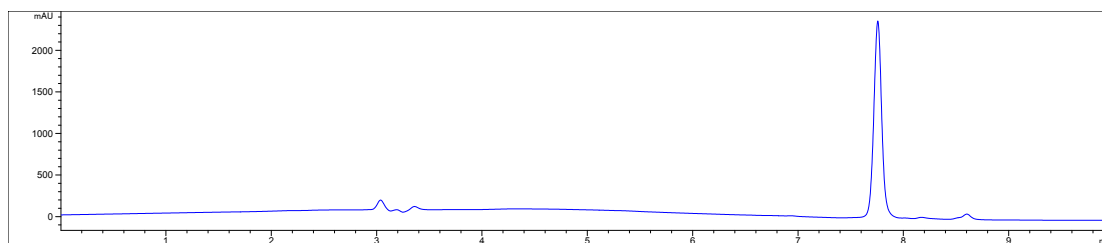
2g



(m/z)calad	(m/z)found
[m+3H] ³⁺ 1311.6	[m+3H] ³⁺ 1310.7
[m+4H] ⁴⁺ 984.0	[m+4H] ⁴⁺ 983.0

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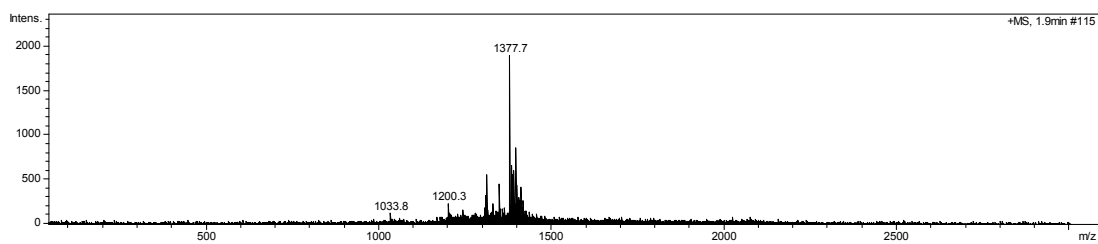
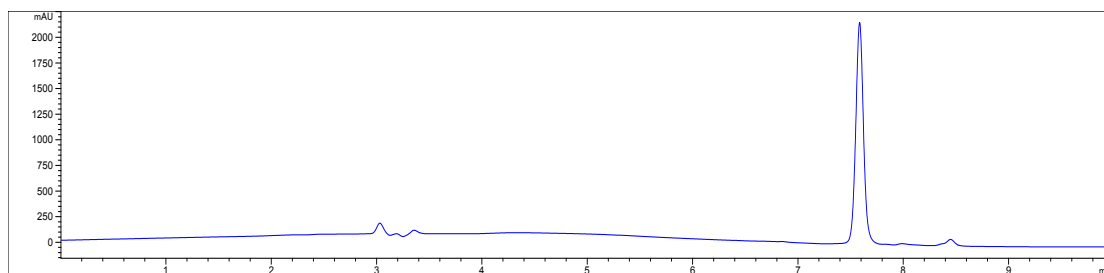
2h



(m/z)calad	(m/z)found
$[m+3H]^{3+}$ 1349.4	$[m+3H]^{3+}$ 1348.3
$[m+4H]^{4+}$ 1012.3	$[m+4H]^{4+}$ 1012.0

Supporting Information

2i



(m/z)calad

(m/z)found

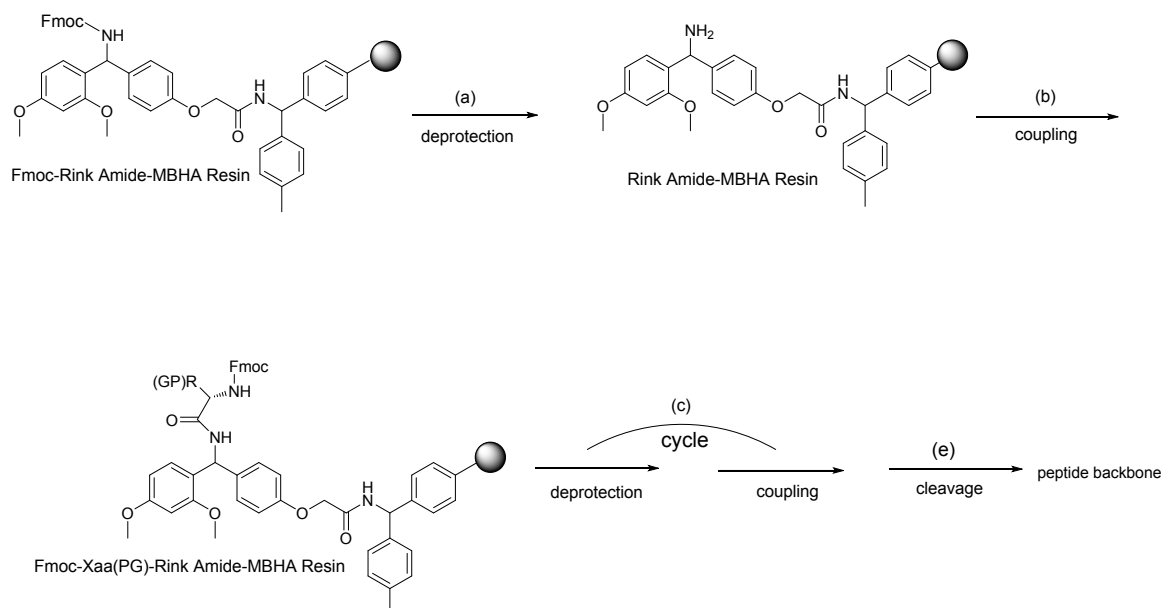
[m+3H]³⁺ 1377.4

[m+3H]³⁺ 1377.7

[m+4H]⁴⁺ 1033.3

[m+4H]⁴⁺ 1033.8

Supporting Information



Scheme S1. General synthesis route of peptide backbone. (a) 20% Piperidine/DMF(V/V); (b) Fmoc-Xaa(PG)-OH, DIC/HOBT; (c) repeated the cycles with related protected amino acids; (d) Reagent K (EDT/phenol/water/thioanisole/TFA, 2.5:5:5:5:82.5). R, amino acid side chain; PG, acid labile protecting group.

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HPLC conditions (Agilent technologies 1260 infinity)

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Mobile phase: mobile phase A: water with 0.1% formic acid, mobile phase B: methanol;

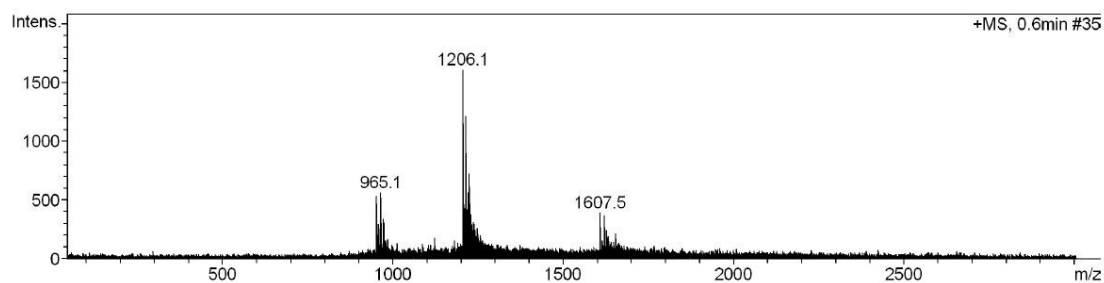
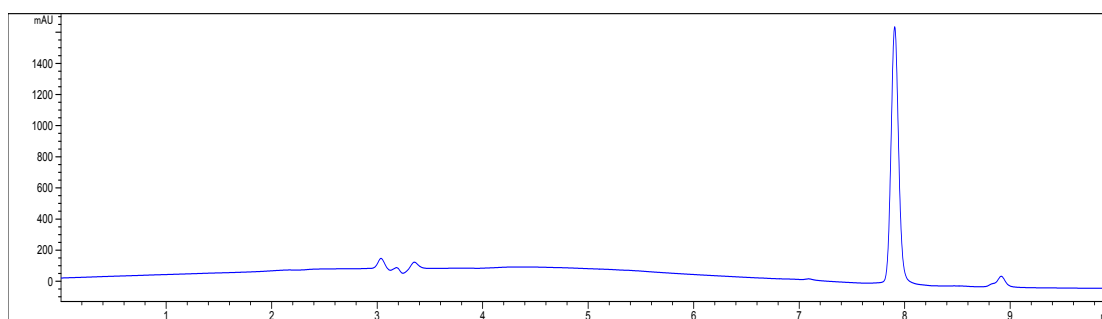
0-5 min, 50-90% B; 5-9 min, 90-90% B; 9-10 min, 90-50% B;

Wavelength: 214 nm;

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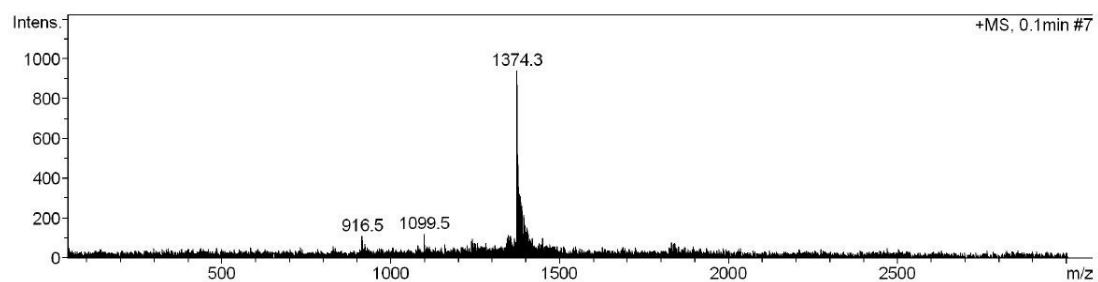
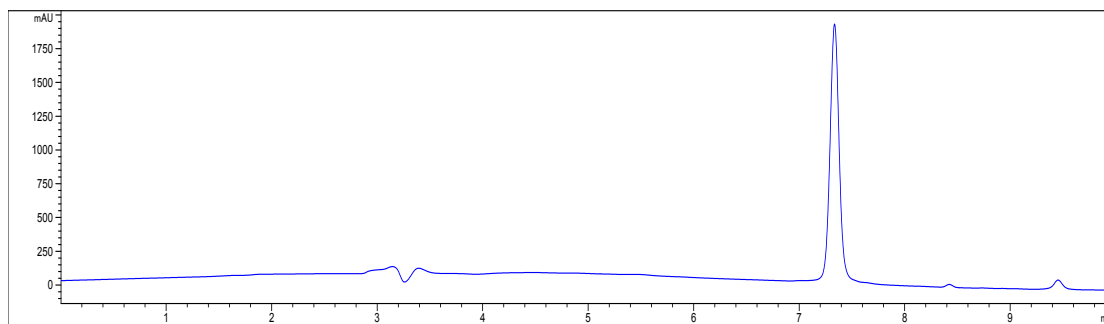
3a



(m/z)calad	(m/z)found
$[\text{m}+3\text{H}]^{3+}$ 1608.7	$[\text{m}+3\text{H}]^{3+}$ 1607.5
$[\text{m}+4\text{H}]^{4+}$ 1206.8	$[\text{m}+4\text{H}]^{4+}$ 1206.1

Supporting Information

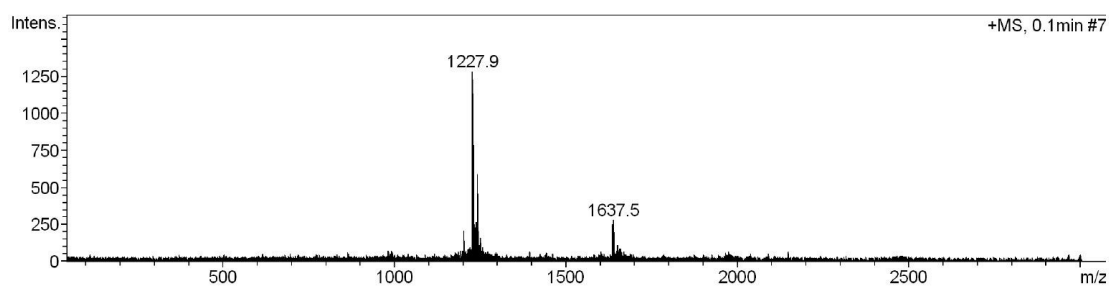
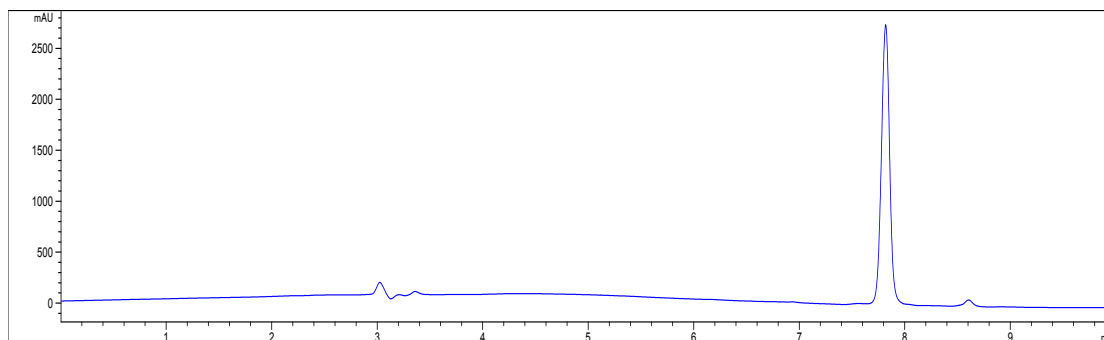
3b



(m/z)calad	(m/z)found
$[m+4H]^{4+}$ 1374.7	$[m+4H]^{4+}$ 1374.3
$[m+5H]^{5+}$ 1100.0	$[m+5H]^{5+}$ 1099.5

Supporting Information

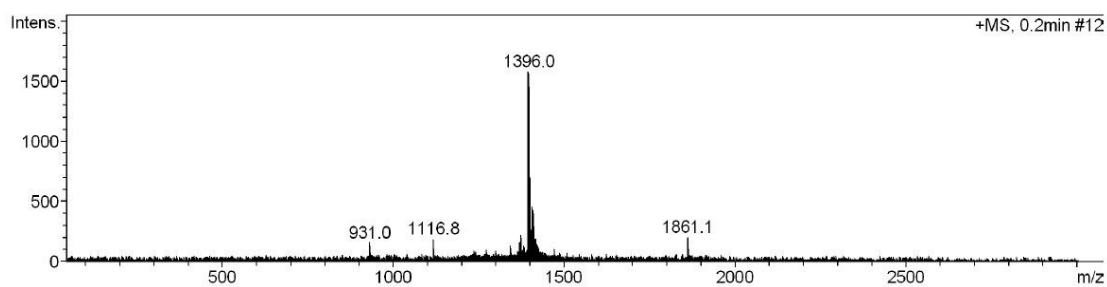
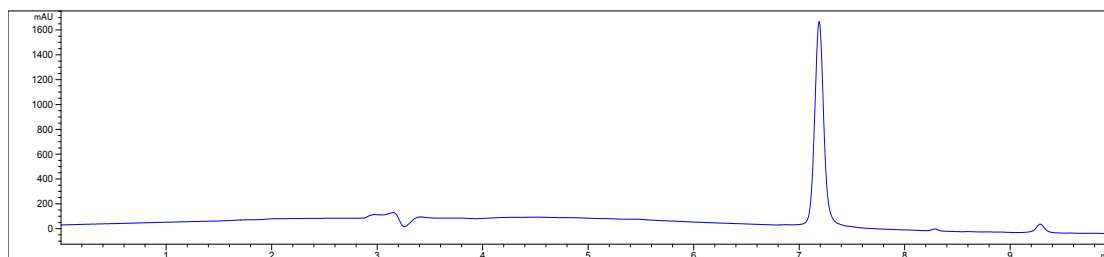
3c



(m/z)calad	(m/z)found
$[m+3H]^{3+}$ 1636.7	$[m+3H]^{3+}$ 1637.5
$[m+4H]^{4+}$ 1227.8	$[m+4H]^{4+}$ 1227.9

Supporting Information

3d



(m/z)calad	(m/z)found
$[m+3H]^{3+}$ 1860.7	$[m+3H]^{3+}$ 1861.1
$[m+4H]^{4+}$ 1395.8	$[m+4H]^{4+}$ 1396.0