Figure 1S. NOTA-RGD and cold Ga-NOTA-RGD showed different R_t values by HPLC chromatogram. NOTA-RGD appeared at 13.1 min and Ga-NOTA-RGD appeared at 12.4 min. Column: XTerra prep column RP18, 10 mm × 250 mm; Solvent: 0~100% ethanol gradient from 0~30 min in 0.01% TFA; Flow rate: 3 mL/min.

Figure 2S. Analysis of ^{68}Ga-NOTA-RGD using ITLC-SG. After spotting with reaction mixtures, the plates were eluted using 0.1 M citric acid and ^{68}Ga-NOTA-RGD remained at the origin, whereas free ^{68}Ga moved with the solvent front which is not clearly seen in this chromatogram due to tailing (A). When eluted with 0.1 M sodium carbonate the situation was reversed, ^{68}Ga-NOTA-RGD moved with the solvent front while free ^{68}Ga remained at the origin (B). A purified preparation was eluted with 0.1 M citric acid and only the ^{68}Ga-NOTA-RGD peak at the origin was found (C), and when eluted by 0.1 M sodium carbonate only ^{68}Ga-NOTA-RGD moving at the solvent front was detected (D).

Figure 3S. Purification of ^{68}Ga-NOTA-RGD by HPLC. Free ^{68}Ga appeared at 4.2 min and ^{68}Ga-NOTA-RGD appeared at 12.6 min on radioactivity detector profile. Unlabeled NOTA-RGD appeared at 13.7 min on UV detection profile. Column: XTerra prep column RP18, 10 mm × 250 mm; Solvent: 0~100% ethanol gradient from 0~30 min in 0.01% TFA; Flow rate: 3 mL/min.

Figure 4S. Paper electrophoresis (0.2 M phosphate buffer (pH 7.0)) showed that ^{68}Ga-NOTA-RGD moved to cathode indicating that it was positively charged at pH 7.0.

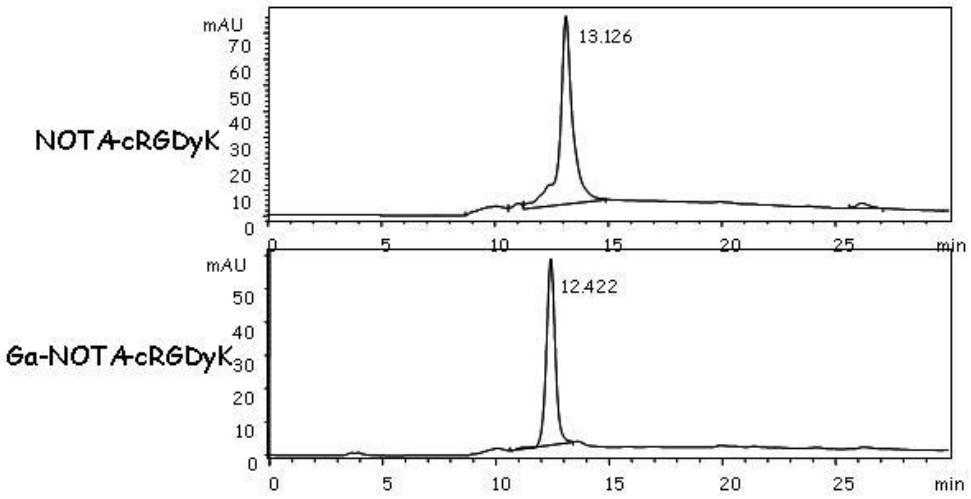

Figure 1S.

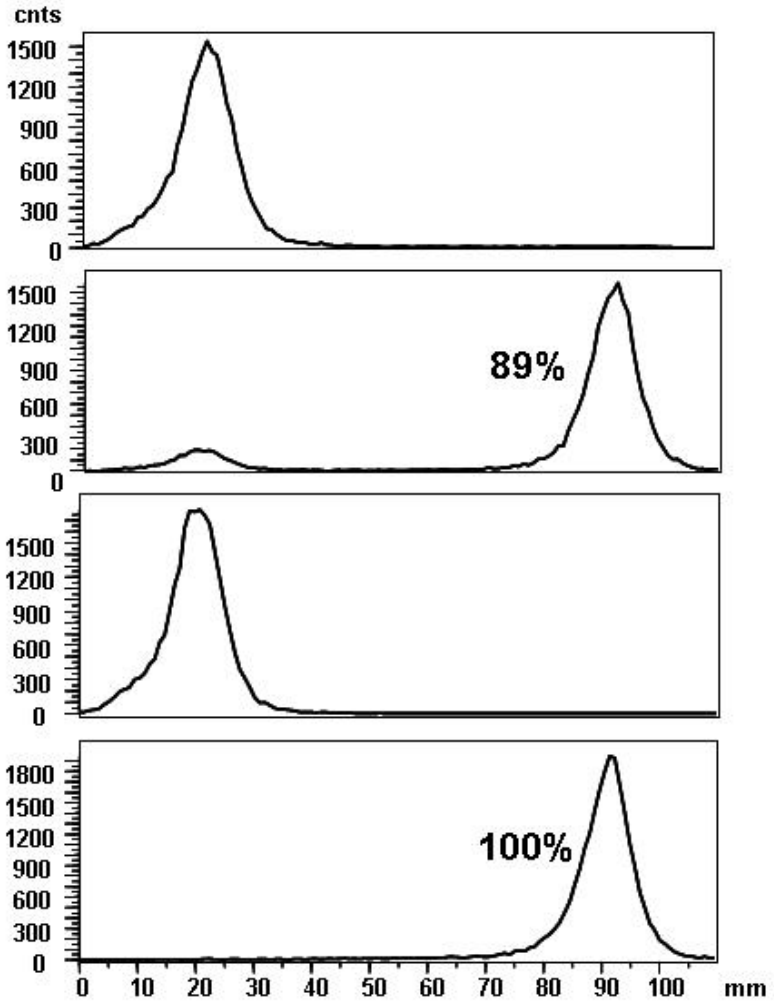
cnts
1500
1200
900
600
300
0
89%
100%
1800
0 10 20 30 40 50 60 70 80 90 100
mm

Figure 2S.

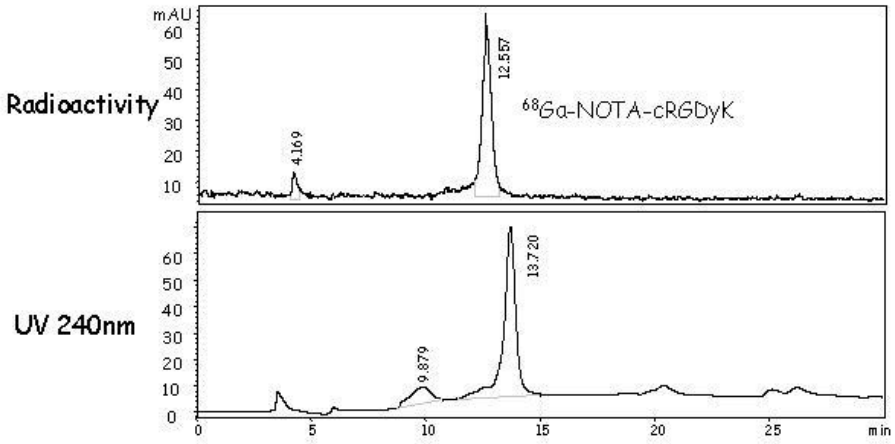
Radioactivity
mAU
60
50
40
30
20
10
4.169
12.557
^{68}Ga-NOTA-cRGDyK
UV 240nm
60
50
40
30
20
10
0
9.879
13.720
0
5
10
15
20
25
min

Figure 3S.

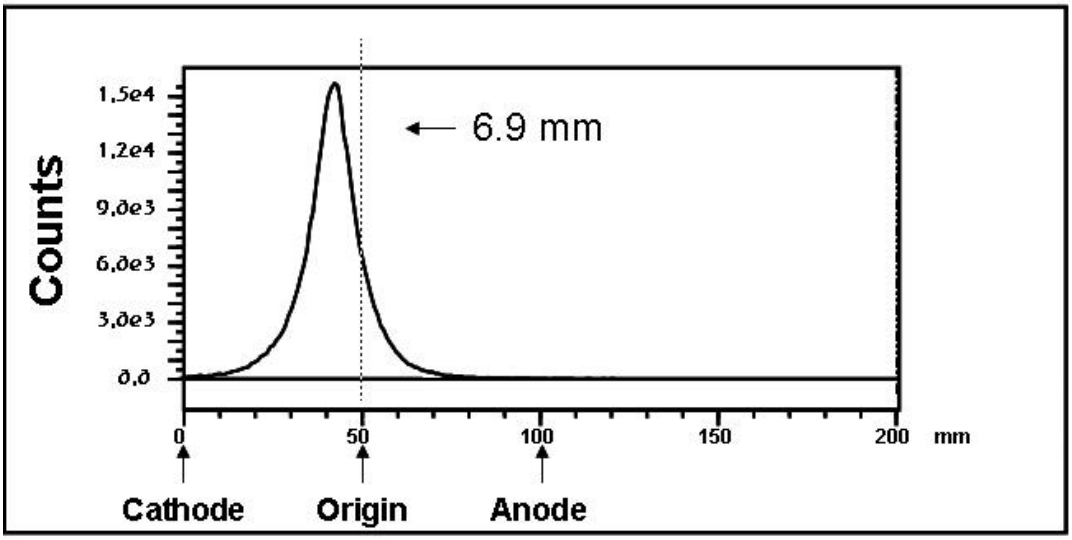
Counts
1.5e4
1.2e4
9.0e3
6.0e3
3.0e3
0.0
6.9 mm
0
50
100
150
200
mm
Cathode
Origin
Anode

Figure 4S.