

Supplemental Table 1. [^{195m}Pt][Lx(H₂O)₂](NO₃)₂ batch characteristics

volume	394 μL
Pt quantity	31.6 μmol
Pt concentration	77 mM
pH	2.5
activity concentration on ART	857 MBq/mL ^{195m} Pt
specific activity on EOI	86 MBq/mg Pt
radiochemical purity on ART	94.758%
radiochemical impurities on ART (% , half-life)	¹⁹⁷ Pt (3.366%, 19.9 h) ¹⁹¹ Pt (0.016%, 2.86 days) ¹⁹⁸ Au (0.472%, 2.70 days) ¹⁹⁹ Au (0.795%, 3.14 days) ¹⁹² Ir (0.029%, 73.83 days) ¹⁹⁴ Ir (0.066%, 19.3 h) ¹¹⁵ Cd (0.014%, 2.23 days) ¹⁸⁷ W (0.006%, 23.7 h) ⁶⁴ Cu (0.026%, 12.7 h)

ART: 62 h after EOI

Supplemental Table 2. Uptake values corresponding to Figure 2A

trastuzumab-[^{195m} Pt]Lx-DFO- ⁸⁹ Zr (1)						
	<i>(based on ⁸⁹Zr counting)</i>			<i>(based on ^{195m}Pt counting)</i>		
blood	7.41	±	2.69	6.77	±	2.88
tumor	29.26	±	8.77	35.54	±	9.37
skin	5.63	±	1.64	4.04	±	1.23
tongue	2.77	±	0.66	3.12	±	1.85
sternum	2.69	±	0.34	1.97	±	0.62
heart	2.47	±	0.61	2.20	±	0.98
lung	3.59	±	0.87	3.55	±	1.38
liver	9.24	±	4.37	7.77	±	3.75
spleen	3.85	±	0.83	3.42	±	0.79
kidney	5.10	±	1.01	5.68	±	0.90
muscle	1.22	±	0.27	1.39	±	0.35
femur	3.02	±	0.55	1.08	±	0.61
colon	1.27	±	0.28	1.44	±	0.33
ileum	2.18	±	0.32	1.76	±	0.33
stomach	1.49	±	0.31	1.37	±	0.36

Mean (%ID/g) ± SD (n = seven animals per conjugate)

Supplemental Table 3. Values corresponding to Figure 2B

time (h)	trastuzumab- ^{195m} Pt]Lx-DFO- ⁸⁹ Zr (1)					
	<i>(based on ⁸⁹Zr counting)</i>			<i>(based on ^{195m}Pt counting)</i>		
2	24.38	±	7.92	25.17	±	7.67
24	12.87	±	3.00	11.92	±	2.08
48	9.74	±	2.66	9.81	±	3.02
72	7.41	±	2.69	6.83	±	2.63

Mean (%ID/g) ± SD (n = seven animals per conjugate)

Supplemental Table 4. Uptake values corresponding to Figure 3A

	trastuzumab- ^[195mPt] Lx-DFO- ⁸⁹ Zr (1)			⁸⁹ Zr-DFO-(Lys)trastuzumab (2)		
	<i>(based on ⁸⁹Zr counting)</i>			<i>(based on ⁸⁹Zr counting)</i>		
blood	7.41	±	2.69	10.48	±	2.13
tumor	29.26	±	8.77	31.62	±	2.97
skin	5.63	±	1.64	4.35	±	0.15
tongue	2.77	±	0.66	3.51	±	0.54
sternum	2.69	±	0.34	2.61	±	0.34
heart	2.47	±	0.61	3.11	±	0.79
lung	3.59	±	0.87	4.44	±	0.99
liver	9.24	±	4.37	4.86	±	0.51
spleen	3.85	±	0.83	3.94	±	0.67
kidney	5.10	±	1.01	4.67	±	0.50
muscle	1.22	±	0.27	1.52	±	0.36
femur	3.02	±	0.55	2.54	±	0.19
colon	1.27	±	0.28	1.16	±	0.31
ileum	2.18	±	0.32	1.56	±	0.25
stomach	1.49	±	0.31	1.42	±	0.20

Mean (%ID/g) ± SD (n = seven animals per conjugate 1; n = six animals per conjugate 2)

Supplemental Table 5. Values corresponding to Figure 3B

time (h)	trastuzumab-[^{195m} Pt]Lx-DFO- ⁸⁹ Zr (1) <i>(based on ⁸⁹Zr counting)</i>			⁸⁹ Zr-DFO-(Lys)trastuzumab (2) <i>(based on ⁸⁹Zr counting)</i>		
2	24.38	±	7.92	23.44	±	8.50
24	12.87	±	3.00	14.63	±	2.15
48	9.74	±	2.66	12.66	±	1.85
72	7.41	±	2.69	10.48	±	2.13

Mean (%ID/g) ± SD (n = seven animals per conjugate **1**; n = six animals per conjugate **2**)

Supplemental Table 6. Uptake values corresponding to Figure 4A

	trastuzumab-[^{195m} Pt]Lx-DFO- ⁸⁹ Zr (1)			trastuzumab-[^{195m} Pt]Lx-AF (3)		
	<i>(based on ^{195m}Pt counting)</i>			<i>(based on ^{195m}Pt counting)</i>		
blood	6.77	±	2.88	8.03	±	1.16
tumor	35.54	±	9.37	32.18	±	7.64
skin	4.04	±	1.23	3.41	±	0.59
tongue	3.12	±	1.85	1.94	±	0.55
sternum	1.97	±	0.62	1.68	±	0.49
heart	2.20	±	0.98	2.36	±	0.65
lung	3.55	±	1.38	3.56	±	0.74
liver	7.77	±	3.75	17.02	±	2.19
spleen	3.42	±	0.79	4.16	±	0.46
kidney	5.68	±	0.90	6.83	±	1.00
muscle	1.39	±	0.35	0.95	±	0.21
femur	1.08	±	0.61	0.87	±	0.17
colon	1.44	±	0.33	1.11	±	0.18
ileum	1.76	±	0.33	1.54	±	0.39
stomach	1.37	±	0.36	1.16	±	0.20

Mean (%ID/g) ± SD (n = seven animals per conjugate **1**; n = six animals per conjugate **3**)

Supplemental Table 7. Values corresponding to Figure 4B

time (h)	trastuzumab- ^[195mPt] Lx-DFO- ⁸⁹ Zr (1)			trastuzumab- ^[195mPt] Lx-AF (3)		
	<i>(based on ^{195m}Pt counting)</i>			<i>(based on ^{195m}Pt counting)</i>		
2	25.17	±	7.67	26.55	±	2.34
24	11.92	±	2.08	11.29	±	1.85
48	9.81	±	3.02	9.82	±	1.81
72	6.83	±	2.63	8.03	±	1.16

Mean (%ID/g) ± SD (n = seven animals per conjugate **1**; n = six animals per conjugate **3**)

Supplemental Table 8. Uptake values corresponding to Figure 5A

⁸⁹ Zr-DFO–trastuzumab–Lx–AF			
	AF DAR 0 (4)	AF DAR 2.6 (5)	AF DAR 5.2 (6)
blood	5.55 ± 2.13	3.24 ± 1.18	2.42 ± 0.43
tumor	29.22 ± 6.82	26.07 ± 4.92	12.88 ± 2.09
skin	2.83 ± 0.52	2.61 ± 0.44	1.71 ± 0.34
tongue	2.17 ± 0.70	1.40 ± 0.26	0.85 ± 0.13
sternum	2.60 ± 0.53	2.35 ± 0.85	1.22 ± 0.04
heart	1.76 ± 0.61	1.17 ± 0.24	0.74 ± 0.09
lung	2.67 ± 1.33	1.96 ± 0.22	1.27 ± 0.16
liver	5.67 ± 0.79	11.38 ± 2.60	28.07 ± 4.19
spleen	2.76 ± 0.62	6.01 ± 4.24	3.28 ± 0.78
kidney	3.31 ± 0.42	3.98 ± 0.44	2.96 ± 0.51
muscle	0.73 ± 0.23	0.57 ± 0.09	0.37 ± 0.04
femur	2.72 ± 0.28	3.26 ± 1.58	1.83 ± 0.69
colon	0.83 ± 0.36	1.18 ± 0.75	0.64 ± 0.12
ileum	0.88 ± 0.16	1.83 ± 1.42	0.66 ± 0.07
stomach	0.84 ± 0.18	0.94 ± 0.36	0.50 ± 0.07

Mean (%ID/g) ± SD (n = six animals per conjugate)

Supplemental Table 9. Values corresponding to Figure 5B

time (h)	⁸⁹ Zr-DFO–trastuzumab–Lx–AF		
	AF DAR 0 (4)	AF DAR 2.6 (5)	AF DAR 5.2 (6)
1	28.99 ± 6.75	28.22 ± 2.21	25.62 ± 2.81
4	24.10 ± 4.05	22.81 ± 1.75	17.53 ± 2.06
24	13.76 ± 2.50	10.85 ± 2.01	7.24 ± 0.63
48	10.21 ± 2.88	7.13 ± 1.68	4.82 ± 0.48
72	6.87 ± 2.27	4.41 ± 1.19	3.33 ± 0.41
96	5.55 ± 2.13	3.24 ± 1.18	2.42 ± 0.44

Mean (%ID/g) ± SD (n = six animals per conjugate)