SUPPLEMENTARY DATA LEGEND

Supplementary Figure 1: Simplified Actinium-225 decay scheme. The half-lives are shown in italics. Ac-225, Actinium-225; Fr-221, Francium-221; Bi-213, Bismuth-213

Supplementary Table 1: High-dose IgG administration alters the pharmacokinetics of ^{225}Ac-labeled HuM195 antibody and that of ^{225}Ac decay elements in mice. Mean difference in organ distribution of ^{225}Ac, ^{221}Fr and ^{221}Bi activity in IgG-treated versus control mice. Data are mean differences in the percentage of injected dose per gram (% ID/g) ± standard error.

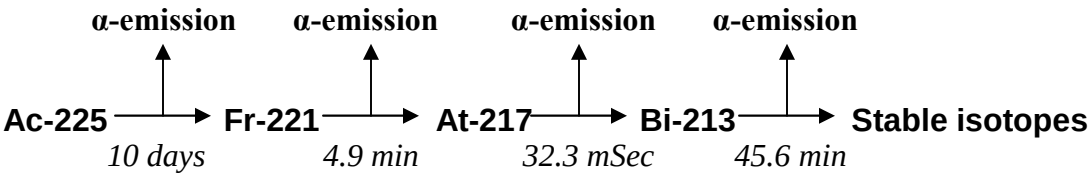
Supplementary Table 2: Relative isotope contribution and the total organ absorbed doses (Gy/MBq) in control and IgG-treated mice following administration of ^{225}Ac-labeled HuM195 antibody.

Supplementary Movie 1: Maximum intensity projection PET scan of representative colon cancer xenograft-bearing mouse at 48 hours following injection with ^{124}I-labeled A33 antibody. The flank tumor and circulating radiolabeled antibody in heart and major vessels is observed.

Supplementary Movie 2: Maximum intensity projection PET scan of representative IgG-treated colon cancer xenograft-bearing mouse at 48 hours following injection with ^{124}I-labeled A33 antibody. The mouse received 1g/kg human IgG i.p., 6 hours following ^{124}I-

A33 injection. As in supplementary movie 1, the flank tumor is well visualized; however, the blood pool activity is significantly lower.

Supplementary Figure 1



Supplementary Figure 1: Simplified Actinium-225 decay scheme. The half-lives are shown in italics. Ac-225, Actinium-225; Fr-221, Francium-221; Bi-213, Bismuth-213

Supplementary Table 1:

Alteration in the ^{225}Ac, ^{221}Fr and ^{213}Bi distribution in animals following high-dose IgG therapy

Organ	***Mean Change****	***95% Confidence Interval***	***P value***
	Actinium-48 hours		
Blood	8.967 ± 1.492	4.825 to 13.11	0.0039
Kidneys	1.533 ± 0.2867	0.7373 to 2.329	0.0059
Liver	-8.133 ± 0.5497	-9.659 to -6.607	0.0001
	Francium-48 hours		
Blood	1.357 ± 0.3154	0.4811 to 2.232	0.0126
Kidneys	11.53 to 22.07	16.80 ± 1.900	0.0009
Liver	-3.900 ± 0.3145	-4.773 to -3.027	0.0002
	Bismuth-48 hours		
Blood	0.2033 ± 0.1397	-0.1844 to 0.5911	0.2192
Kidneys	27.23 ± 2.865	19.28 to 35.19	0.0007
Liver	-6.967 ± 0.4137	-8.115 to -5.818	<0.0001
	Actinium-120 hours		
Blood	13.07 ± 0.6227	11.34 to 14.80	< 0.0001
Kidneys	1.000 ± 0.08165	0.7733 to 1.227	0.0003
Liver	-11.07 ± 0.8807	-13.51 to -8.622	0.0002
	Francium-120 hours		
Blood	1.590 ± 0.6537	-0.2246 to 3.405	0.0718
Kidneys	13.43 ± 0.9545	10.78 to 16.08	0.0001
Liver	-5.467 ± 1.008	-8.264 to -2.669	0.0056
	Bismuth-120 hours		
Blood	0.2467 ± 0.08340	0.01515 to 0.4782	0.0417
Kidneys	24.80 ± 0.5437	23.29 to 26.31	< 0.0001
Liver	-8.900 ± 0.8615	-11.29 to -6.508	0.0005
	Actinium-192 hours		
Blood	9.933 ± 0.9905	7.184 to 12.68	0.0006
Kidneys	2.900 ± 0.4190	1.737 to 4.063	0.0023
Liver	-5.433 ± 1.951	-10.85 to -0.1638	0.0496
	Francium-192 hours		
Blood	2.240 ± 0.4287	1.050 to 3.430	0.0064
Kidneys	10.73 ± 0.9690	8.043 to 13.42	0.0004
Liver	-2.200 ± 1.089	-5.223 to 0.8226	0.1134
	Bismuth-192 hours		
Blood	0.9600 ± 0.1322	0.5931 to 1.327	0.0019
Kidneys	28.50 ± 3.244	19.50 to 37.50	0.0009
Liver	-4.333 ± 1.503	-8.505 to -0.1621	0.0448

* expressed as mean difference in the percentage of injected dose per gram

Supplementary Table 2:

Relative isotope contributions and the total organ absorbed doses (Gy/MBq) in Control and IgG-treated mice following administration of ^{225}Ac-labeled HuM195 antibody

	Control					IgG treated				
Tissue	^{225}Ac	^{221}Fr	^{217}At	^{213}Bi	Total	^{225}Ac	^{221}Fr	^{217}At	^{213}Bi	Total
Blood	107.2	15.8	17.5	14.6	155.0	25.9	2.8	3.1	9.7	41.6
Kidneys	55.5	285.0	316.7	879.8	1537.0	17.3	44.5	49.4	195.6	306.8
Liver	100.9	60.7	67.5	128.4	357.6	198.1	111.8	124.2	244.0	678.0

Ac-225, Actinium-225; Fr-221, Francium-221; Bi-213, Bismuth-213; Gy, Gray; MBq, Megabecquerel