

**Supplemental Table 1.** Biodistribution in Rip1Tag2 mice at 0.5, 1, 2 and 4 h after injection of [ $\text{Lys}^{40}$ (Ahx-DOTA- $^{68}\text{Ga}$ )NH<sub>2</sub>]-exendin-4.

Organ	0.5 h	1 h	2 h	4 h
Lungs*	4.29±0.77	4.58±1.03	3.18±0.23	3.43±0.29
Pancreas*	2.22±0.81	2.05±0.43	1.73±1.45	1.87±0.38
Stomach*	0.33±0.06	0.32±0.07	0.23±0.04	0.21±0.05
Tumor*	1.77±0.67	2.05±0.87	1.88±0.52	1.89±0.41
Kidneys	63.8±2.9	70.8±6.0	66.1±1.5	60.0±6.8
Liver	1.24±0.06	0.86±0.15	0.88±0.16	0.53±0.13
Spleen	0.14±0.05	0.13±0.03	0.15±0.03	0.13±0.02
Red marrow	1.24±0.29	0.80±0.10	0.29±0.02	0.17±0.06

The results are expressed as %IA/organ (mean ± SD) and are decay corrected, n ≥ 3

\*GLP-1 receptor positive organs

**Supplemental Table 2.** Biodistribution in Rip1Tag2 mice at 0.5, 2, 4 and 18 h after injection of [ $\text{Lys}^{40}$ (Ahx-HYNIC- $^{99\text{m}}\text{Tc}/\text{EDDA}$ )NH<sub>2</sub>]-exendin-4.

Organ	0.5 h	2 h	4 h	18 h
Lungs*	1.79±0.54	2.03±0.72	2.28±0.73	0.64±0.36
Pancreas*	1.08±0.49	0.87±0.26	0.98±0.33	0.63±0.28
Stomach*	0.11±0.04	0.13±0.06	0.12±0.06	0.11±0.05
Tumor*	0.63±0.21	0.72±0.34	0.69±0.33	0.41±0.25
Kidneys	18.7±2.0	17.7±0.8	18.5±1.8	12.2±1.1
Liver	1.16±0.28	1.00±0.39	1.03±0.26	0.94±0.19
Spleen	0.05±0.01	0.03±0.01	0.04±0.26	0.03±0.02
Red marrow	1.34±0.47	0.45±0.07	0.20±0.07	0.10±0.02

The results are expressed as %IA/organ (mean ± SD) and are decay corrected, n ≥ 3

\*GLP-1 receptor positive organs

**Supplemental Table 3.** Biodistribution in Rip1Tag2 mice at 1, 4, 12, 36, 84 and 168 h after injection of [ $\text{Lys}^{40}(\text{Ahx}-\text{DOTA}-^{111}\text{In})\text{NH}_2$ ]-exendin-4.

Organ	1 h	4 h	12 h	36 h	84 h	168 h
Lungs*	7.40±0.22	4.22±0.53	1.08±0.08	0.78±0.15	0.49±0.07	0.13±0.05
Pancreas*	2.23±0.05	3.10±1.05	1.54±0.56	1.38±0.77	0.6±90.14	0.54±0.18
Stomach*	0.38±0.06	0.36±0.12	0.13±0.04	0.12±0.02	0.08±0.01	0.07±0.04
Tumor*	3.45±1.8	1.92±1.4	0.88±0.68	1.02±0.74	0.37±0.33	0.38±0.19
Kidneys	66.9±2.6	64.2±2.3	63.4±6.3	43.2±2.4	20.7±1.4	11.7±2.3
Liver	1.37±0.13	1.44±0.16	1.31±0.34	1.08±0.31	0.67±0.06	0.47±0.08
Spleen	0.12±0.01	0.12±0.02	0.11±0.01	0.07±0.01	0.04±0.01	0.03±0.01
Red marrow	0.44±0.13	0.19±0.11	0.14±0.04	0.07±0.01	0.03±0.01	0.02±0.01

The results are expressed as %IA/organ (mean ± SD) and are decay corrected, n ≥ 3

\*GLP-1 receptor positive organs