Cyclotron produced ^{132}La as a PET imaging surrogate of therapeutic ^{225}Ac

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Supplementary information

Table S1: [^{132}La]-NM600 and [^{225}Ac]-NM600 mouse serum stability quantified by r-TLC (n = 3, mean ± SD).

Time (h) p.i.	Stability (%)	
	[^{132}La]-NM600	**[^{225}Ac]-NM600**
0	99.0 ± 0.7	98.8 ± 0.3
4	98.7 ± 0.6	98.7 ± 0.1
24	98.9 ± 0.7	97.7 ± 0.6

Table S2: [^{132}La]-NM600 tissue uptake quantification of hand-drawn PET ROIs (n = 3, mean ± SD).

Tissue	Uptake (%IA/g)		
	4h p.i.	**10h p.i.**	**24h p.i.**
Heart/blood	17.8 ± 1.3	13.8 ± 1.3	7.3 ± 0.8
Muscle	1.5 ± 0.3	1.8 ± 0.3	1.1 ± 0.1
Bone	2.5 ± 0.3	2.2 ± 0.2	1.9 ± 0.3
Liver	12.8 ± 0.4	18.3 ± 0.5	16.1 ± 0.6
Kidney	7.0 ± 0.4	7.6 ± 0.5	6.4 ± 0.5
4T1 tumor	5.1 ± 0.4	7.6 ± 0.5	11.5 ± 1.3

Table S3: *Ex vivo* [^{225}Ac]-NM600 biodistribution at 4 and 24h p.i., and [^{13x}La]-NM600 24h p.i., measured by gamma counting (n = 3, mean ± SD).

Tissue	Uptake (%IA/g)		
	[^{225}Ac]-NM600 4h p.i.	**[^{225}Ac]-NM600 24h p.i.**	**[^{13x}La]-NM600 24h p.i.**
Blood/Heart	16.8 ± 0.8	5.7 ± 0.3	9.9 ± 0.2
Skin	2.2 ± 0.2	1.8 ± 0.5	2.7 ± 0.1
Muscle	0.8 ± 0.2	0.6 ± 0.1	1.0 ± 0.2
Bone	1.8 ± 0.4	2.0 ± 0.6	1.7 ± 0.1
Heart	5.2 ± 0.1	3.2 ± 0.3	3.7 ± 0.2
Lung	5.9 ± 1.7	2.5 ± 0.6	7.0 ± 1.1
Liver	11.9 ± 0.6	17.5 ± 0.3	17.1 ± 0.9
Kidney	6.1 ± 1.8	7.0 ± 0.7	9.0 ± 0.3
Spleen	2.2 ± 0.6	3.8 ± 0.1	4.6 ± 0.7
Pancreas	1.8 ± 0.8	1.5 ± 0.2	1.7 ± 0.4
Stomach	1.6 ± 0.2	1.3 ± 0.6	1.23 ± 0.6
Intestine	1.8 ± 0.1	1.7 ± 0.2	1.5 ± 0.4
4T1 tumor	4.6 ± 0.4	11.5 ± 2.1	11.1 ± 0.8
Brain	0.66 ± 0.06	0.29 ± 0.01	0.31 ± 0.02
Thymus	1.6 ± 0.5	1.6 ± 0.1	2.1 ± 1.1