

Additional File 6. MRI sequences and acquisition parameters. All in vivo data was acquired with a 4-channel surface coil designed for the mouse brain or abdomen. Post mortem data was obtained with a 27 mm volume coil.

	<i>In vivo</i>					<i>Post Mortem</i>
	FLASH T ₂ * (Abdomen)	FLASH T ₂ * (Brain)	B0 Map	MGE T ₂ * Map	RARE T ₂ (Tumours)	FLASH T ₂ * (Organs)
Echo Time	5.5 ms	4.2 ms	3.6 ms	N/A	25 ms	6.3
Repetition Time	262.6 ms	262.6 ms	10 ms	900 ms	2500 ms	1300
Flip Angle	20.0°	20.0°	15.0°	50.0°	90° excit. 180° refoc.	20°
Matrix Size	386 x 386 pixels	256 x 256 pixels	64 x 64 x 64 pixels	256 x 256 pixels	256 x 192 pixels	386 x 386 pixels
Field of View	35 x 35 mm	20 x 20 mm	45 x 45 x 45mm	35 x 35 mm	40 x 30 mm	15 x 15 mm
Averages	3	3	3	2	4	24
Slices	20	20	1	20	30	70
Slice Thickness	0.5 mm	0.5 mm	45 mm	0.5 mm	1.0 mm	0.2 mm
Echo Images	N/A	N/A	N/A	8	N/A	N/A
Echo Spacing	N/A	N/A	N/A	4.5ms, start at 4.5ms	N/A	N/A
Acquisition Time	5m 35s	4m 4s	2m 3s	5m 7s	4m	3h 20m 43s