

Supplementary Material

SUPPLEMENTARY TABLE S1. DWI SINGLE-AXIS DIFFUSION DIRECTIONS

No.	DW vectors			b-values		
	Left-right	Dorsal-ventral	Rostral-caudal	Left-right	Dorsal-ventral	Rostral-caudal
1	0.000	0.000	0.000	0	0	0
2	0.000	0.000	0.000	0	0	0
3	0.000	0.000	0.000	0	0	0
4	0.258	0.000	0.000	200	0	0
5	0.408	0.000	0.000	500	0	0
6	0.577	0.000	0.000	1000	0	0
7	0.816	0.000	0.000	2000	0	0
8	0.816	0.000	0.289	2000	0	250
9	0.816	0.000	0.408	2000	0	500
10	0.816	0.000	0.500	2000	0	750
11	0.816	0.000	0.577	2000	0	1000
12	0.816	0.000	0.000	2000	0	0
13	0.816	0.000	-0.289	2000	0	250
14	0.816	0.000	-0.408	2000	0	500
15	0.816	0.000	-0.500	2000	0	750
16	0.816	0.000	-0.577	2000	0	1000
17	-0.258	0.000	0.000	200	0	0
18	-0.408	0.000	0.000	500	0	0
19	-0.577	0.000	0.000	1000	0	0
20	-0.816	0.000	0.000	2000	0	0
21	-0.816	0.000	0.289	2000	0	250
22	-0.816	0.000	0.408	2000	0	500
23	-0.816	0.000	0.500	2000	0	750
24	-0.816	0.000	0.577	2000	0	1000
25	-0.816	0.000	0.000	2000	0	0
26	-0.816	0.000	-0.289	2000	0	250
27	-0.816	0.000	-0.408	2000	0	500
28	-0.816	0.000	-0.500	2000	0	750
29	-0.816	0.000	-0.577	2000	0	1000

Only directions with left-right b-value=2000 are used to estimate $fADC_{||}$; only directions with rostral-caudal b-values=0 are used for estimation of AWF.

AWF, axonal water fraction; DWI, diffusion-weighted imaging; DW, diffusion-weighted; $fADC_{||}$, “filtered” parallel diffusivity from imaged-based DDE; AWF, axonal water fraction.

SUPPLEMENTARY TABLE S2. DDE-PRESS DIFFUSION DIRECTIONS

No.	DW1				DW2			
	Left-Right	Dorsal-Ventral	Rostral-Caudal	b-value	Left-Right	Dorsal-Ventral	Rostral-Caudal	b-value
1	0.000	0.000	0.000	0	0.000	0.000	0.000	0
2	1.000	0.000	0.000	2000	0.000	0.000	0.000	0
3	1.000	0.000	0.000	2000	0.000	0.000	0.354	250
4	1.000	0.000	0.000	2000	0.000	0.000	0.500	500
5	1.000	0.000	0.000	2000	0.000	0.000	0.612	750
6	1.000	0.000	0.000	2000	0.000	0.000	0.707	1000
7	1.000	0.000	0.000	2000	0.000	0.000	0.791	1250
8	1.000	0.000	0.000	2000	0.000	0.000	0.866	1500
9	1.000	0.000	0.000	2000	0.000	0.000	0.935	1750
10	1.000	0.000	0.000	2000	0.000	0.000	1.000	2000

Only DW directions with DW1 b-value=2000 are used to estimate $fADC_{||}$.

DDE, double-diffusion encoding; dpi, days post-injury; DW, diffusion-weighted; $fADC_{||}$, “filtered” parallel diffusivity from imaged-based DDE; PRESS, point-resolved single-voxel spectroscopy.