

**Table S1.** Age, education and performances of the different control groups employed.

	Test	n°	Age (years)	Education	Raw score
<i>Intellectual level</i>	QI WAIS-r	32	42,42 (9,51)	12,03 (3,8)	103,57 (10,76)
<i>Executive functions</i>	Phonological fluency	72	48,14 (12,70)	13,42 (3,66)	40,77 (10,18)
	WCST n° perseverative errors	43	47,44 (12,11)	13,91 (3,48)	7,95 (6,85)
	Stroop Test - accuracy	43	47,44 (12,11)	13,91 (3,48)	0,31 (1,57)
	Rey's 15 words – Immediate recall *	340	53,1 (18,00)	10,2 (4,30)	42,31 (10,16)
<i>Short-term memory</i>	Forward digit span	63	43,56 (14,58)	12,17 (3,19)	6,08 (1,24)
	Backward digit span	63	43,56 (14,58)	12,17 (3,19)	4,45 (0,97)
	Forward Corsi	63	51,13 (15,49)	12,33 (4,12)	5,82 (1,19)
	Short-Story Recall - Immediate recall *	30	40 – 49	13,3 (3,4)	5,95 (1,38)
<i>Long-term memory</i>	Rey's 15 words – Delayed recall *	340	53,1 (18,00)	10,2 (4,30)	8,90 (3,16)
	Short-Story Recall - Delayed recall *	30	40 – 49	13,3 (3,4)	5,9 (1,45)
	MFTC - Accuracy *	465	62,1 (20,96)	8,92 (5,32)	0,94 (0,058)
	Lines cancellation task – Accuracy *	40	69,3 (8,0)	8,4 (4,2)	59,80 (0,40)
<i>Attention</i>	Stroop Test – execution time	43	47,44 (12,11)	13,91 (3,48)	19,17 (10,00)
	MFTC - Execution time *	465	62,1 (20,96)	8,92 (5,32)	80,95 (40,07)
	Lines cancellation task – Execution time *	40	69,3 (8,0)	8,4 (4,2)	47,30 (24,50)

\* Published normative data

**Table S2.** Individual scores of International Cooperative Ataxia Rating Scale (ICARS) in SCA2 patients.

ID	Posture and Gait Disturbances	Kinetic Functions	Speech Disorders	Oculomotor Disorders	ICARS TOT
CB1	13,5	28,5	3	2	47
CB2	12	11	2	1	26
CB3	13	13	2	0	28
CB4	13	10	3	1	27
CB5	13	13	3	2	31
CB6	11	15	2	0	28
CB7	18	15	3	3	39
CB8	7	7	2	1	17
CB9	8	11	3	2	24
CB10	12	13	3	1	29
CB11	11	12	0	1	24
CB12	24	30	5	2	61
<b>Means</b>	12,96	14,87	2,58	1,33	31,75
<b>(SD)</b>	(4,44)	(7,06)	(1,16)	(0,89)	(11,95)

ICARS range: minimum score 0 (absence of motor deficits), maximum score 100 (maximum presence of motor deficits).  
 Postural and gait disturbances: maximum score 34; kinetic functions: maximum score 52; speech disorders: maximum score 8; oculomotor disorders: maximum score 8.