

Table SI. Comparison of demographic and insulin/IGF signaling-related variables between participants with (n=17) and without (n=15) coenzyme Q10 use.

Parameter	SCA3 with Q10	SCA3 without Q10	P-value
Demographics			
Male sex	10 (58.5)	10 (66.7)	0.647
Age, years	49.0 (41.5-55.0)	47.0 (33.0-55.0)	0.521
BMI, kg/m ²	22.7 (21.0-25.7)	21.2 (18.4-25.1)	0.141
Age at onset, years	43.0 (29.5-49.0)	34.0 (29.0-38.0)	0.308
Duration, years	8.0 (5.5-11.5)	10.0 (3.0-18.0)	0.909
CAG repeat number	71.0 (68.5-74.5)	72.0 (70.0-74.0)	0.985
SARA	14.0 (9.8-21.0)	15.5 (5.0-21.5)	0.910
NfL, pg/ml	28.3 (24.0-34.7)	20.8 (18.0-32.8)	0.355
Insulin/IGF1 system			
IGF1, ng/ml	85.6 (64.7-111.1)	9836 (80.0-110.0)	0.396
IGF2, ng/ml	365.7 (316.2-403.3)	366.7 (305.4-390.4)	0.664
IGFBP1, pg/ml	315.3 (19.9-805.1)	208.9 (84.3-451.0)	0.970
IGFBP3, ng/ml	41.2 (35.8-69.2)	43.6 (38.1-52.1)	0.925
IGF1/IGFBP3 ratio	1.7 (1.3-2.4)	2.1 (1.4-3.2)	0.355
Glucose, mg/dl	101.3 (85.1-130.2)	90.6 (81.2-101.6)	0.146
Insulin, μ IU/ml	6.2 (3.0-11.8)	6.0 (2.1-10.5)	0.720
G/I ratio	14.6 (9.7-36.6)	19.1 (8.4-32.1)	0.895

^aP<0.05. All data are presented as median (interquartile range), with the exception of sex which is n (%). Sex was analyzed using the Fisher's exact test; all other continuous variables were analyzed using the Mann-Whitney U test. IGF1, insulin-like growth factor 1; BMI, body mass index; SARA, scale for the assessment and rating of ataxia; NfL, neurofilament light chain; IGFBP, insulin-like growth factor binding protein.

Table SII. AUC values of IIS components for differentiating early versus advanced spinocerebellar ataxia type 3 stages.

IIS component	AUC (95%CI)	P-value
IGFBP1	0.829 (0.646-1.000)	0.003 ^a
Insulin	0.494 (0.293-0.694)	0.953
IGF1	0.541 (0.302-0.780)	0.706
IGF1/IGFBP3 ratio	0.528 (0.301-0.755)	0.796
IGF2	0.385 (0.157-0.613)	0.293

^aP<0.05. All data are presented as median (interquartile range). AUC and 95% CI were estimated using the DeLong non-parametric method within ROC analysis to evaluate the predictive performance of IIS components. IIS, insulin/insulin-like growth factor signaling; IGF1, insulin-like growth factor 1; IGFBP; IGF binding protein; AUC, area under the curve; CI, confidence interval.