

Table S1. End-joining in Arabidopsis leaf protoplast as determined by Q-PCR.

Protoplast were isolated from wild-type (WT), Atku70 or Atku80 mutants and transformed with linear plasmid (X) or circular plasmid (O) in triplicate.

End-joining was determined as the ratio of q8-q9 products divided by q10-q11 products, corrected for dying protoplast (X/O), during 24h of incubation (X24h-X0h).

The ratio of end-joining in the mutants compared to the wild-type was calculated $(X24h-X0h)/AVG(X24h-X0h)_{WT}$ and the average and standard deviation was calculated.

The value of the wild-type was set on 1.

	q8+q9			q10+q11			(q8+q9)/(q10+q11)		
	exp1	exp2	exp3	exp1	exp2	exp3	exp1	exp2	exp3
WT									
X0h	0.094533333	0.1741	0.05744	11.41	31.18	41.09	0.00828513	0.005583708	0.001397907
X24h	0.01685	0.03796	0.06432	0.3403	1.864	2.556	0.049515134	0.020364807	0.025164319
O0h	7.482666667	38.54	14.8	3.500666667	14.13	13.67	2.13749762	2.727530078	1.082662765
O24h	0.299466667	3.305	3.922	0.151533333	2.099	2.638	1.976242851	1.574559314	1.486732373
K80									
X0h	0.063983333	0.2302	0.1109	7.554666667	56.42	48.33	0.008469379	0.004080113	0.002294641
X24h	0.018033333	0.04063	0.1445	0.649866667	3.356	8.183	0.027749282	0.012106675	0.01765856
O0h	3.710666667	24.99	25.81	2.186	13.93	17.02	1.69746874	1.793969849	1.516451234
O24h	0.263366667	6.652	3.848	0.127066667	3.529	2.133	2.072665268	1.884953245	1.80403188
K70									
X0h	0.681473855	0.663917483	0.678965802	78.1	73.62	62.33	0.008725658	0.009018167	0.010893082
X24h	0.041812828	0.03959141	0.045288273	1.329	1.002	1.13	0.031461872	0.039512385	0.040078118
O0h	73.14	74.39	69.76	33.49	34.76	32.23	2.183935503	2.140103567	2.164443065
O24h	1.792	1.606	1.566	0.7103	0.6117	0.6103	2.522877657	2.625470002	2.565951172

	X/O			X24h-X0h				(X24h-X0h)/avg(X24h-X0h)WT			relative avg	sd
	exp1	exp2	exp3	exp1	exp2	exp3	avg	exp1	exp2	exp3		
WT												
X/O 0h	0.003876089	0.002047166	0.001291175	0.021179098	0.010886489	0.015634749	0.015900112	1.332009372	0.684680001	0.983310627	1	0.323987238
X/O 24h	0.025055187	0.012933655	0.016925924									
K80												
X/O 0h	0.004989417	0.002274349	0.001513165	0.008398795	0.004148449	0.008275221	0.006940822	0.5282224	0.26090693	0.520450482	0.436526604	0.152140734
X/O 24h	0.013388212	0.006422798	0.009788386									
K70												
X/O 0h	0.003995382	0.004213893	0.005032741	0.008475247	0.010835749	0.010586464	0.00996582	0.53303064	0.681488876	0.665810644	0.62677672	0.081564069
X/O 24h	0.012470629	0.015049642	0.015619205									

Summary	exp 1	exp 2	exp3	avg	sd
WT	1.332009372	0.684680001	0.983310627		1 0.323987238
Ku70	0.53303064	0.681488876	0.665810644	0.62677672	0.081564069
Ku80	0.5282224	0.26090693	0.520450482	0.436526604	0.152140734