

Non-randomized mtDNA damage after ionizing radiation via charge transport

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Supplementary 1: Computational scanning of the three-codon motif across the mitochondrial genome

The 16569 bp mtDNA was divided into 9 sections, each contained an equal number of 1841 bp fragment. The scanning began at position 14898 according to the SLR rt-PCR data. The scanning program was design by C language.

AAA		AAG		ACA		ACG	
14898-169	44	14898-169	20	14898-169	53	14898-169	15
170-2010	80	170-2010	46	170-2010	58	170-2010	15
2011-3851	70	2011-3851	34	2011-3851	46	2011-3851	14
3852-5692	59	3852-5692	21	3852-5692	43	3852-5692	11
5693-7533	44	5693-7533	22	5693-7533	41	5693-7533	11
7534-9374	55	7534-9374	17	7534-9374	47	7534-9374	19
9375-11215	48	9375-11215	14	9375-11215	48	9375-11215	14
11216-13056	47	11216-13056	18	11216-13056	55	11216-13056	11
13056-14897	77	13056-14897	17	13056-14897	57	13056-14897	9
AAC		AAT		AAC		ACT	
14898-169	41	14898-169	39	14898-169	54	14898-169	37
170-2010	65	170-2010	35	170-2010	63	170-2010	36
2011-3851	64	2011-3851	38	2011-3851	61	2011-3851	35
3852-5692	53	3852-5692	56	3852-5692	61	3852-5692	50
5693-7533	37	5693-7533	35	5693-7533	49	5693-7533	36
7534-9374	56	7534-9374	47	7534-9374	62	7534-9374	49
9375-11215	50	9375-11215	46	9375-11215	47	9375-11215	54
11216-13056	60	11216-13056	33	11216-13056	43	11216-13056	62
13056-14897	69	13056-14897	47	13056-14897	75	13056-14897	53
ATA		ATC		ATG		ATT	
14898-169	34	14898-169	53	14898-169	19	14898-169	43
170-2010	43	170-2010	18	170-2010	16	170-2010	25
2011-3851	29	2011-3851	36	2011-3851	19	2011-3851	32
3852-5692	56	3852-5692	45	3852-5692	17	3852-5692	31
5693-7533	40	5693-7533	42	5693-7533	19	5693-7533	38
7534-9374	38	7534-9374	48	7534-9374	24	7534-9374	38
9375-11215	43	9375-11215	42	9375-11215	17	9375-11215	52
11216-13056	43	11216-13056	41	11216-13056	19	11216-13056	35
13056-14897	41	13056-14897	46	13056-14897	12	13056-14897	36
CAG		CAT		CCA		CCC	
14898-169	23	14898-169	52	14898-169	54	14898-169	59
170-2010	29	170-2010	26	170-2010	51	170-2010	79
2011-3851	27	2011-3851	37	2011-3851	46	2011-3851	58
3852-5692	21	3852-5692	50	3852-5692	54	3852-5692	76
5693-7533	23	5693-7533	47	5693-7533	43	5693-7533	61
7534-9374	15	7534-9374	52	7534-9374	55	7534-9374	71
9375-11215	15	9375-11215	43	9375-11215	47	9375-11215	56
11216-13056	24	11216-13056	57	11216-13056	49	11216-13056	76
13056-14897	22	13056-14897	52	13056-14897	65	13056-14897	88

CGA		CGC		CGG		CGT	
14898-169	12	14898-169	18	14898-169	11	14898-169	11
170-2010	17	170-2010	15	170-2010	6	170-2010	10
2011-3851	14	2011-3851	17	2011-3851	12	2011-3851	9
3852-5692	13	3852-5692	17	3852-5692	4	3852-5692	7
5693-7533	15	5693-7533	14	5693-7533	18	5693-7533	17
7534-9374	14	7534-9374	18	7534-9374	8	7534-9374	10
9375-11215	17	9375-11215	16	9375-11215	7	9375-11215	6
11216-13056	10	11216-13056	16	11216-13056	8	11216-13056	6
13056-14897	10	13056-14897	24	13056-14897	6	13056-14897	2
CTG		CTT		GAA		GAC	
14898-169	18	14898-169	39	14898-169	15	14898-169	22
170-2010	19	170-2010	32	170-2010	30	170-2010	18
2011-3851	22	2011-3851	29	2011-3851	27	2011-3851	18
3852-5692	17	3852-5692	40	3852-5692	26	3852-5692	16
5693-7533	30	5693-7533	35	5693-7533	29	5693-7533	22
7534-9374	20	7534-9374	35	7534-9374	19	7534-9374	21
9375-11215	19	9375-11215	40	9375-11215	22	9375-11215	14
11216-13056	20	11216-13056	37	11216-13056	14	11216-13056	19
13056-14897	15	13056-14897	32	13056-14897	19	13056-14897	19
GCA		GCC		GCG		GCT	
14898-169	24	14898-169	32	14898-169	6	14898-169	15
170-2010	29	170-2010	25	170-2010	11	170-2010	27
2011-3851	24	2011-3851	30	2011-3851	10	2011-3851	16
3852-5692	26	3852-5692	26	3852-5692	1	3852-5692	20
5693-7533	24	5693-7533	30	5693-7533	6	5693-7533	29
7534-9374	16	7534-9374	38	7534-9374	6	7534-9374	16
9375-11215	15	9375-11215	36	9375-11215	6	9375-11215	17
11216-13056	21	11216-13056	30	11216-13056	4	11216-13056	25
13056-14897	28	13056-14897	24	13056-14897	4	13056-14897	14
GGG		GGT		GTA		GTC	
14898-169	21	14898-169	9	14898-169	26	14898-169	15
170-2010	9	170-2010	15	170-2010	23	170-2010	11
2011-3851	10	2011-3851	17	2011-3851	21	2011-3851	14
3852-5692	5	3852-5692	5	3852-5692	10	3852-5692	8
5693-7533	7	5693-7533	13	5693-7533	22	5693-7533	15
7534-9374	7	7534-9374	5	7534-9374	16	7534-9374	12
9375-11215	5	9375-11215	5	9375-11215	14	9375-11215	14
11216-13056	7	11216-13056	8	11216-13056	15	11216-13056	11
13056-14897	1	13056-14897	3	13056-14897	7	13056-14897	6

TAA		TAC		TAG		TAT	
14898-169	33	14898-169	42	14898-169	23	14898-169	42
170-2010	57	170-2010	33	170-2010	38	170-2010	23
2011-3851	50	2011-3851	37	2011-3851	27	2011-3851	26
3852-5692	56	3852-5692	49	3852-5692	28	3852-5692	35
5693-7533	32	5693-7533	34	5693-7533	30	5693-7533	44
7534-9374	54	7534-9374	46	7534-9374	27	7534-9374	37
9375-11215	42	9375-11215	51	9375-11215	31	9375-11215	52
11216-13056	43	11216-13056	43	11216-13056	30	11216-13056	37
13056-14897	47	13056-14897	41	13056-14897	24	13056-14897	28
TCG		TCT		TGA		TGC	
14898-169	14	14898-169	32	14898-169	20	14898-169	16
170-2010	5	170-2010	18	170-2010	19	170-2010	16
2011-3851	11	2011-3851	32	2011-3851	22	2011-3851	13
3852-5692	11	3852-5692	44	3852-5692	23	3852-5692	11
5693-7533	24	5693-7533	45	5693-7533	25	5693-7533	16
7534-9374	10	7534-9374	30	7534-9374	24	7534-9374	18
9375-11215	12	9375-11215	36	9375-11215	23	9375-11215	12
11216-13056	17	11216-13056	38	11216-13056	21	11216-13056	13
13056-14897	17	13056-14897	32	13056-14897	13	13056-14897	8
TTA		TTC		TTG		TTT	
14898-169	29	14898-169	37	14898-169	20	14898-169	25
170-2010	43	170-2010	17	170-2010	13	170-2010	30
2011-3851	41	2011-3851	27	2011-3851	17	2011-3851	20
3852-5692	40	3852-5692	35	3852-5692	9	3852-5692	25
5693-7533	21	5693-7533	50	5693-7533	14	5693-7533	35
7534-9374	38	7534-9374	31	7534-9374	11	7534-9374	24
9375-11215	50	9375-11215	34	9375-11215	16	9375-11215	57
11216-13056	38	11216-13056	35	11216-13056	12	11216-13056	20
13056-14897	29	13056-14897	42	13056-14897	4	13056-14897	15
AGA		AGG		GGA		GGC	
14898-169	18	14898-169	16	14898-169	18	14898-169	14
170-2010	35	170-2010	23	170-2010	16	170-2010	14
2011-3851	28	2011-3851	27	2011-3851	15	2011-3851	21
3852-5692	16	3852-5692	19	3852-5692	11	3852-5692	12
5693-7533	18	5693-7533	29	5693-7533	28	5693-7533	25
7534-9374	17	7534-9374	14	7534-9374	7	7534-9374	18
9375-11215	14	9375-11215	14	9375-11215	8	9375-11215	21
11216-13056	18	11216-13056	15	11216-13056	6	11216-13056	17
13056-14897	14	13056-14897	17	13056-14897	14	13056-14897	9

AGC		AGT		GTG		GTT	
14898-169	29	14898-169	18	14898-169	4	14898-169	4
170-2010	47	170-2010	28	170-2010	17	170-2010	16
2011-3851	29	2011-3851	24	2011-3851	8	2011-3851	24
3852-5692	33	3852-5692	15	3852-5692	2	3852-5692	13
5693-7533	34	5693-7533	16	5693-7533	8	5693-7533	12
7534-9374	22	7534-9374	16	7534-9374	4	7534-9374	7
9375-11215	25	9375-11215	20	9375-11215	6	9375-11215	8
11216-13056	34	11216-13056	16	11216-13056	5	11216-13056	13
13056-14897	29	13056-14897	8	13056-14897	1	13056-14897	7
CAA		CAC		TCA		TCC	
14898-169	52	14898-169	54	14898-169	50	14898-169	56
170-2010	59	170-2010	56	170-2010	32	170-2010	16
2011-3851	59	2011-3851	37	2011-3851	45	2011-3851	30
3852-5692	48	3852-5692	47	3852-5692	42	3852-5692	45
5693-7533	33	5693-7533	44	5693-7533	40	5693-7533	37
7534-9374	47	7534-9374	54	7534-9374	49	7534-9374	43
9375-11215	46	9375-11215	49	9375-11215	43	9375-11215	42
11216-13056	54	11216-13056	49	11216-13056	59	11216-13056	44
13056-14897	67	13056-14897	64	13056-14897	55	13056-14897	48
CCG		CCT		TGG		TGT	
14898-169	18	14898-169	70	14898-169	14	14898-169	11
170-2010	16	170-2010	37	170-2010	16	170-2010	14
2011-3851	17	2011-3851	58	2011-3851	14	2011-3851	17
3852-5692	18	3852-5692	60	3852-5692	5	3852-5692	6
5693-7533	23	5693-7533	50	5693-7533	19	5693-7533	11
7534-9374	15	7534-9374	73	7534-9374	8	7534-9374	8
9375-11215	14	9375-11215	64	9375-11215	13	9375-11215	11
11216-13056	8	11216-13056	60	11216-13056	8	11216-13056	14
13056-14897	12	13056-14897	70	13056-14897	3	13056-14897	8
CTA		CTC		GAG		GAT	
14898-169	50	14898-169	47	14898-169	15	14898-169	16
170-2010	42	170-2010	25	170-2010	20	170-2010	18
2011-3851	50	2011-3851	41	2011-3851	20	2011-3851	15
3852-5692	63	3852-5692	54	3852-5692	13	3852-5692	8
5693-7533	56	5693-7533	39	5693-7533	22	5693-7533	13
7534-9374	72	7534-9374	41	7534-9374	10	7534-9374	12
9375-11215	69	9375-11215	43	9375-11215	13	9375-11215	13
11216-13056	57	11216-13056	71	11216-13056	11	11216-13056	11
13056-14897	64	13056-14897	58	13056-14897	5	13056-14897	8

Supplementary 2: Software packages information

The software packages used for motif scanning and counting triple G abundance ratio are now available via the following links:

<https://www.box.com/s/ko5isfqivkvnc0yn0j38>

<https://www.box.com/s/puos4djay7evpr8bzbv52>

The software packages are RAR files. The packages consist of an executable file, a sample file/directory and a readme file for notification.