Table S1. Construction Oligonucleotides and Sequences.

	Sequence	Function
1	TGGGGTCGGGCCTCGAGGGGAATTCTAGGGTACCATGGGA	RIZ with 5 G-clusters
2	GATCTCCCATGGTACCCTAGAATTCCCCTCGAGGCCCGACCCCATGCA	complementary to 1
3	ATCGAGTGAGTGTGTGAGCTGAGTGTGTGAGAGCTGTGAGTGAGAGTGA GAGCTGTGAGAGTGAGAGCTGAGTGAGAGTG	one REZ repeat unit with 4 AGCT sites (high G-density)
4	CTCGATCACTCTCACTCAGCTCTCACTCTCACAGCTCTCACTCTCACTCA CAGCTCTCACACACTCAGCTCACACACTCA	complementary to 3
5	ATCGAATGAGTATGTGAGCTTAGTGTATGAAAGCTGTTAGTGAAAGTGATA GCTGTAAGAGTTAGAGCTAAGTGATAGTT	one REZ repeat unit with 4 AGCT sites (low G-density)
6	TTCGATAACTATCACTTAGCTCTAACTCTTACAGCTATCACTTTCACTAACA GCTTTCATACACTAAGCTCACATACTCA	complementary to 5
7	GATCTTATAGAATATTATGTATTTAAAGTTCATAGTATTTCAGATCTATTATGTA G	insert 50bp AT-rich sequence between the RIZ and the REZ
8	TCGACTACATAATAGATCTGAAATACTATGAACTTTAAATACATAATATTCTAT AA	complementary to 7
9	GATCTTTCGAAGTCGTCATGTCAGTCTGAGAAGTTCAGTCGAGTCGTCAG ATCGTG	insert 50bp random sequence between the RIZ and the REZ
10	TCGACACGATCTGACGACTCGACTGAACTTCTCAGACTGACATGACGACT TCGAAA	complementary to 9
11	GGCAGGAGATCTAACTCTTTGTCCAATCTCTCTTTC	PCR primer to amplify the 150 bp insertion
12	GCCACTAGTGTCGACAGTGAGTTTTTGTTAGAAAAGAGAA	Paired with 11
13	TATGTATAGAATATTATGTATTTAAAGTTCATAGTATTTCAGATCTATTATGTAA	insert 50bp AT-rich sequence upstream of the RIZ
14	CTAGTTACATAATAGATCTGAAATACTATGAACTTTAAATACATAATATTCTAT ACA	complementary to 13
15	TATGTTCGAAGTCGTCATGTCAGTCTGAGAAGTTCAGTCGAGTCGTCAGA TCGTA	insert 50bp random sequence upstream of the RIZ
16	CTAGTACGATCTGACGACTCGACTGAACTTCTCAGACTGACATGACGACT TCGAACA	complementary to 15
17	AGATCTAACTCTTTGTCCAATCTCTCTTTCCACTCCACAATTCTGCTCTGAA TACTTTGAGCAAACTCAGCCACAGGTCTGTACCAAATTAACATAAGAAGCA AAGCAATGCCACTTTGAATTATTCTCTTTTCTAACAAAAACTCACTGTCGAC	PCR product of 11 and 12

Table S2. PCR Primers for Diagnosis and Bisulfite Sequencing Oligonucleotides.

	Sequence	**Function**
ZZ46	TCACCCAGTCCTAAGCTCTCTACC	forward primer in the Iα
ZZ49	GTAGTCTTCACACTGCCCATCTCG	reverse primer near the first Cα
ZZ103	CACTCGATATCGTCGACAGATCTCC	diagnose the insertion of DNA with (5/6 or 7/8 +)1/2 + 3/4, paired with ZZ46
ZZ104	GTGATCGAGATCGGATCCATCGAT	diagnose the insertion of DNA with (5/6 or 7/8 +)1/2 + (9/10 or 11/12 +) 3/4, paired with ZZ49
ZZ463	GATCTCCCATGGTACCCTAGAATTCC	diagnose the insertion of DNA with 1/2 + 9/10 or 11/12 + 3/4, paired with ZZ46
ZZ455	GTCGACAGATCTCCCATGGTACC	diagnose the insertion of DNA with 1/2 + 13/14, paired with ZZ46
ZZ457	AGCTAAGTGATAGTTAATCGGATCCATCG	diagnose the insertion of DNA with 1/2 + 13/14, paired with ZZ49
ZZ465	GGGTTTTGAGGGGAATTTTAGGGTATT	forward converted primer for bisulfite sequencing
ZZ471	CTCGATCTAGAGAACCCCTTCATCG	reverse native primer for bisulfite sequencing

Table S3. qPCR Primers and Probes

	Sequence	Function
S9.6 ChIP		
ZZ304	[6-FAM]CCCAGTGATAATCGGCTGCCTGATTC[BHQ1a-6FAM]	probe for the Sα region
ZZ305	CCCACGAGCTCTGTCAAGTG	forward primer for the Sα region
ZZ306	GCCGGAAGGGAAGTAATCG	reverse primer for the Sα region
GLT Quantification		
ZZ274	CCTATGAAGGACACTCAACAACATTG	forward for the α region
ZZ275	CCGATTATCACTGGGTCACTTG	reverse primer for the α region
ZZ276	[6-FAM]ATCTACCCACTGACACTCCCACGAGCTC[BHQ1a-6FAM]	probe for the α region
ZZ277	TGCTCCCCGGGCTGTATT	forward primer for β-actin region
ZZ278	ACATAGGAGTCCTTCTGACCCATT	reverse primer for β-actin region
ZZ279	[6-FAM]ATCGTGGGCCGCCCTAGGCAC[BHQ1a-6FAM]	probe for the β-actin region