

S5 Table. The distribution and characteristic of GC clusters in different yeast lineages

Species	Num	Palindromic	FamilyNum	Consensus	RC Consensus	Features
Lmey	69	17%	25	GGGGGGGGGGGG	CCCCCC	
			9	GTTGGGGGGG	CCCCCCCCAC	
Ldas	24	12%	21	GGAGGGGG	CCCCCTCC	
			13	GGGGGGGGGGAGG	CCCTCCCCCCC	ploy(G)s or poly(C)s
			12	CCTTCGGGGGGG	CCCCCCGAAG	
Lthe	61	28%	8	CTTGGGGGGGGGG	CCCCCCCCCAAG	
			8	GGAGGGGGGGGG	CCCCCCCCCTCC	
			24	GTGACCGGGGGG	CCCCCGGGTCAC	
Lklu	79	13%	11	GCCCCCCCCCCC	GGGGGGGGGTGGC	
			8	CCTCCCCCCCCCCC	GGGGGGGGGGGGAGG	
			75	GACGGGGG	CCCCGGTC	
Nbac	285	25%	49	CCCCGGGC	GGGGGGGG	
			36	CCCCGCAAC	GTGCGGGG	
			20	GGACTACGGGGGG	CCCCCCCCGTAGTCC	
Ccas	103	48%	52	GGCCCCGGG	CCCCGGGCC	
			16	GACCCCGGGGGG	CCCCCCCCGGGTTC	
			12	GGGGGCTAAGGGGG	CCCCGGGTAGCCCC	
Ndel	16	18%	17	GGTCGGG	CCCCGACC	
Ncas	34	14%	8	GGGACGGGGGG	CCCCGGGTCCC	
			8	GGGGGGGGGGGG	CCCCCCCCCCCC	
Kser	56	20%	9	CGCGGGGAG	CTCCCCGGG	
Sbay	123	31%	32	GCCCCGGGCCCGGGGGGGGACCCGGTAGGGAG	CTCCCTAGGGGGTCCCGGGCCGCGGGGGGGGG	a2 like*
			19	GTCGGGGGGGGCGGACGCCGGAGAG	CTCTCCGGGCTCGGGCCCCCCCCAC	
			17	CGGGGCCC	GGGACCCG	Cluster B&
Skud	138	22%	13	CTCTTAACGGGCTCGGGCCCCCGGGGGGGG	GCCCCCGGGGGGGGGGGGGGGGGGGGG	
			50	CGGGCCCCAGGGGAGGGGGTAGGG	CCCCTAACGGGGTCCGGGGCTGGGGCGG	a2 like*
			45	CTCTTAACGGGCTCGGGCCCCGGGGGG	GTCCCCGGGGCCAGGGGACCCGTAAGGAG	a2 like*
Smik	123	28%	24	CGGGGGGGGGGGGGGGGGGGGGGGGGGG	GTTGGGGGGGGGGGGGGGGGGGGGGGG	
			18	CGGGGGGGGGGGGGGGGGGGGGGGGG	CGGGGGGGGGGGGGGG	
			20	CGGGGTTCCC	GGGACCCCG	Cluster A&
Spar	88	30%	20	GTCCCCGGCCAGGGGGGGGGAGAG	CTCTCTGGGGTCCGGGTGGGGGGGAC	a2 like*
			18	GGGGGAGGGGGTGTTG	CACCCACCCCTCCCC	
			30	CGGGGACCCGG	CGGGGCCCCCG	Cluster B&
Scer	226	33%	17	GGTGGGGGTC	GGGACCCCCC	Cluster A&
			10	GGGGGAGGGGGTGTTG	CACCCACCCCTCCCC	Cluster C&
			47	CTCTTGGGGGGGGGGCTGGGGGGGGGGGG	GTCCCCGGGGCCGGGGGGGGGGGGGGGG	a1*
Scer	226	33%	27	GTCCGGGGCCCCGGGGGGGGGGGGGGGG	CTCTTGGGGTCCGGGGGGGGGGGGGGGG	a2*
			23	GGGACCCCC	GGGGGGTCCC	Cluster A&
			18	GGGGGGGGGG	CGGGGGTCCC	Cluster B&

Note: The ‘Num’ col indicated the number of GC clusters in the MT genome of each yeast. The ‘Palindromic’ col indicated the proportion of palindromic-like GC clusters. The ‘FamilyNum’ indicated the number of the main sub-families in each yeast (number > = 8). The ‘Consensus’ and ‘RC Consensus’ cols indicated the consensus sequence and the reverse complementary sequence of each subfamily. In the ‘Features’ col, * = The al and a2 family in de Zamaroczy and Bernardi, 1986; & = GC clusters A, B, C of *ori* sequences.