

ib geni	e_Ψ1 ge	ene_Ψ2 g	gene_Ψ3 g	gene_Ψ4 g	ene_Ψ1_N ger	ne_Ψ2_N gene	_Ψ3_N gene_	_Ψ4_N gen	e_N site_\	Ψ1 site_Ψ	2 site_Ψ3 si	te_Ψ4 site_Ψ1_N	site_Ψ2_N	site_Ψ3_N sit	te_Ψ4_N site_N	quartet_Ψ	1 quartet_Ψ2	ያ quartet_Ψ3	quartet_Ψ4 qι	uartet_Ψ1_N q	quartet_Ψ2_N	quartet_Ψ3_N qı	uartet_Ψ4_N q	uartet_N quar	tet_Ψ1_pp quarto	et_Ψ2_pp qua	rtet_Ψ3_pp leng	gth_subs_per_site	
07* 33 08* 50		33.33 16.67	33.33 16.67	0.00	3	1	1 C	0 3 1 6	3 14.9 6 57.1			0 1.97 0 11.26	6.02 6.54	5.11 1.92	0 13.097 0 19.715	33.33 51.28	33.33	33.33 16.67	0	3.08	1.00	1.00	0	6		0.33	0.33	0.0000010 0.0014936	0.0019120
109 45		0.00	0.00	54.55	5	0	0 6	6 1	1 57.2	23.23		0 5.35	2.22	1.89	0 9.448	69.82	20.26	9.92	0	7.68	2.23	1.09	0	11		0.01	0.01	0.0034576	0.0046512
10* 38 11* 37		15.38 31.25	7.69 12.50	38.46 18.75	6	5	2 3		3 23.46 26.1			0 1.55 0 3.33	2.92 6.61	2.21	0 6.678 0 12.662	55.35 45.31	33.28 40.10	11.37 14.58	0	7.20 7.25	4.33 6.42	2.33	0).12).35	0.05	0.0022483	0.0040546
112 68		7.58	6.06	18.18	45	5	4 1		56 51.5			0 39.39	21.00	16.10	0 76.492		13.54	9.45	0	50.83	8.94	6.24	0	66		0.00	0.00	0.0077183	0.0143522
113 65 114 88		0.00	6.82 0.00	13.64	29 32	6	3 6	6 4 <i>4</i>	45.5 36 80.7			0 12.72 0 22.46	8.20 3.04	7.11 2.38	0 28.031 0 27.879	69.89 97.50	17.94 2.20	12.17 0.30	0	30.75 35.10	7.89 0.79	5.36 0.11	0	36		0.00	0.00	0.0066525 0.0134813	0.0156315 0.0312703
115 84		13.33	2.22	0.00	38	6	1 C		5 72.8			0 35.90	8.50	4.90	0 49.305		13.33	2.22	0	38.00	6.00	1.00	0	45		0.00	0.00	0.0096689	0.0312703
116 93 117* 37		2.17 25.93	0.00	4.35 14.81	43	7	0 2		88.0 27 21.9		5.10 38.78	0 57.00 0 5.08	4.46 9.04	3.32	0 64.778 0 22.984	95.65 43.95	3.26 29.63	1.09 26.42	0	44.00 11.87	1.50 8.00	0.50 7.13	0	46 27).00).16	0.00	0.0141986 0.0013857	0.0291043 0.0109830
		3.45		10.34	25	1	0 3				7.97		3.90	2.65		94.40		1.19	0	27.38	1.28	0.34	0	29		0.00	0.00	0.0013837	0.0109830
119 43		11.63	4.65	40.70	37	10	4 3		36 45.5			0 15.16	9.24	8.94	0 33.345	61.93	23.24	14.83	0	53.26	19.98	12.76	0	86		0.00	0.00	0.0024747	0.0087185
120 28 21* 18		7.23 19.44	6.02 16.67	57.83 45.83	13	14 1		18 83 33 72	33 42.1 '2 23.8			0 8.24 0 2.58	8.11 4.38	3.44	0 19.792 0 10.946		23.33	20.87 32.68	0	46.32 23.86	19.36 24.61	17.32 23.53	0	72		0.00	0.00	0.0022161	0.0066455
122 71		3.51	0.00	24.56	41	2	0 1		90.9		2.99	0 15.17	1.03	0.51	0 16.716		8.65	5.46	0	48.96	4.93	3.11	0	57		0.00	0.00	0.0058147	0.0190890
123 40124 66		25.00 6.67	0.00	22.50 26.67	16	10	0 4		5 74.6			0 10.25 0 11.69	3.51	0.03	0 13.795 0 15.665	49.30 75.87	30.35 13.33	20.36	0	19.72 11.38	2.00	8.14 1.62	0	40 15		0.04	0.02	0.0009231 0.0027646	0.0036968
25* 66	5.67	16.67	0.00	16.67	4	1	0 1	1 6	6 0.00	0.00	0.00	0 0.00	0.00	0.00	0 0.000	66.67	32.29	1.04	0	4.00	1.94	0.06	0	6	0.83).12	0.05	0.0012523	0.0040409
26* 60 27* 22			0.00	20.00 55.56	2	1	1 5	1 5 5 9	5 11.2 9 0.00		0.00	0 0.11 0 0.00	0.00	0.00	0 0.112 0 0.112	60.48 44.94	23.81	15.71 25.11	0	3.02 4.04	1.19 2.70	0.79 2.26	0).15).24	0.12	0.0000010	0.0018637
128 85	5.71	14.29	0.00	0.00	6	1	0 0	0 7	7 99.9	0.02	0.00	0 10.34	0.00	0.00	0 10.346	85.71	14.29	0.00	0	6.00	1.00	0.00	0	7	0.99	0.01	0.00	0.0056103	0.0055065
129 70 130 41			0.00 8.93	27.45 37.50	36 23	7			51 91.0 56 50.0		2.13 18.97	0 10.27 0 11.29	0.79 7.10	0.25 4.27	0 11.316 0 22.648		11.16 23.57	7.28 17.16	0	41.60 33.19	5.69 13.20	3.71 9.61	0	51 56		0.00	0.00	0.0075994	0.0144564
31* 18	3.42	21.05	15.79	44.74	7	8	6 1	17 38	32.7	2 65.65	1.63	0 1.00	2.01	0.07	0 3.078	39.12	35.69	25.19	0	14.87	13.56	9.57	0	38	0.53).34	0.13	0.0006280	0.0017648
32* 10 33* 23				68.42 47.06	4	3	2 1:	13 19 8 1	9 80.47 14.8		0.53 21.73	0 1.50 0 4.28	0.45 18.21	0.01 6.25	0 1.956 0 28.740	50.29	33.02	16.69 18.58	0	9.56 8.72	5.12	3.17	0	19 17).13).11	0.06	0.0013668	0.0015871
134 72	2.73	0.00	0.00	27.27	16	0	0 6	6 2	22 96.0	5 3.69	0.26	0 6.92	0.28	0.02	0 7.224	84.03	8.81	7.16	0	18.49	1.94	1.58	0	22	1 (0.00	0.00	0.0044732	0.0099988
135* 37 136 68		43.75 1.67	12.50 0.00	6.25 30.00	6 41	7	201		6 33.5 60 76.7			0 2.010 24.11	2.00 5.89	1.97 1.44	0 5.9780 31.438	43.67 83.85	43.83 10.11	12.50 6.04	0	6.99 50.31	7.01 6.07	2.00 3.62	0	16 60		0.47	0.07	0.0002397 0.0057716	0.0021888 0.0154649
37* 13		8.89	4.44	73.33	6	4	2 3		15.9	8 70.81	11.21	0 1.57	6.14	1.00	0 8.705	36.93	36.07	27.01	0	16.62	16.23	12.15	0		0.45).40	0.16	0.0005550	0.0009046
38* 8. 39* 10			0.00	91.67 70.00	1	2	0 1 7		96.70 0.00		0.05 33.56	0 2.95 0 0.00	0.12 2.11	0.00	0 3.073 0 3.112	41.92 52.90	41.86 27.83	16.22 19.27	0	5.03 5.29	5.02 2.78	1.95 1.93	0).44).15	0.12	0.0004995 0.0000380	0.0019377 0.0023732
140 19	9.05			66.67	4	3	0 1		21 50.3			0 3.19	1.90	1.19	0 6.274	64.63	30.51	4.86	0	13.57	6.41	1.02	0		0.99	0.01	0.00	0.0002933	0.0038356
141* 12 142 38		15.00 4.76	7.50 0.00	65.00 57.14	5 8	61	3 2 0 1		19.2 21 85.1			0 2.730 5.16	7.44 0.74	4.34 0.22	0 14.5140 6.117	35.69 54.56	38.37 25.88	25.93 19.57	0	14.28 11.46	15.35 5.43	10.37 4.11	0			0.50	0.14	0.0002263 0.0006082	0.0014185 0.0032089
43* 23	3.53	11.76	5.88	58.82	4	2			7 44.7	75 50.39	4.86	0 2.56	2.93	0.31	0 5.805	52.08	24.45	23.48	0	8.85	4.16	3.99	0		0.85	0.08	0.07	0.0001970	0.0025549
144 57 45* 33			0.00	35.71 33.33	3	2	0 5	5 1 ₄	4 74.1 9 15.7			0 1.10 0 0.97	0.45 4.86	0.11	0 1.655 0 5.827	83.64 44.44	9.08 28.22	7.28 27.33	0	11.71 4.00	1.27 2.54	1.02 2.46	0	14 9		0.00	0.00	0.0041365 0.0002392	0.0065535 0.0038466
46* 28				21.43	4	5	2 3	3 14	4 11.7			0 2.52	11.80	7.15	0 21.466		35.71	21.50	0	5.99	5.00	3.01	0).32	0.15	0.0002810	0.0015358
147 77 148 64		0.00 6.67	0.00 4.44	22.22	56 29	3	0 1	16 72 11 4	72 89.5 15 95.3		4.19 1.99	0 18.39 0 7.17	1.33 0.22	0.88	0 20.602 0 7.549	91.95 78.24	4.57 12.87	3.48 8.89	0	66.20 35.21	3.29 5.79	2.50 4.00	0	72 45		0.00	0.00	0.0070987 0.0029269	0.0257970 0.0117502
49* 30		15.38		42.31	8	4	3 1		26 47.3			0 1.80	1.75	0.00	0 3.552	45.87	27.62	26.51	0	11.93	7.18	6.89	0).12	0.11	0.0000010	0.0035078
50* 30 51* 17				25.00 58.82	3	2	2 10	5 20 10 1 ⁻	20 56.0 7 99.0		0.00	0 7.85 0 1.13	3.68 0.00	0.00	0 14.015 0 1.135	44.34 44.22	29.94	25.71 25.05	0	8.87 7.52	5.99 5.22	5.14 4.26	0).19).21	0.14	0.0009347 0.0007032	0.0018049 0.0007876
152 60			0.00	30.00	6	1	0 3	3 10	0 56.8			0 1.64	1.00	0.21	0 2.845	66.85	25.59	7.56	0	6.69	2.56	0.76	0).04	0.02	0.0039161	0.0049924
153* 9. 154 16			9.09 4.17	72.73 75.00	4	1	1 8		1 82.0 24 60.0			0 3.05 0 2.98	0.75 1.15	0.00 1.03	0 3.804 0 5.158	34.64 56.33	37.39 22.55	27.96 21.12	0	3.81 13.52	4.11 5.41	3.08 5.07	0			0.41	0.25	0.0002809 0.0011095	0.0039744
55* 16			16.67	50.00	4	4	4 1		24 79.3			0 6.48	1.20	0.53	0 8.215	37.55	36.28	26.17	0	9.01	8.71	6.28	0).39	0.18	0.0008526	0.0024211
156 35157 30				38.71 38.89	11	6			31 61.2 36 49.1			0 6.990 10.22	2.89 9.47	1.60	0 11.468 0 20.688		29.27 27.82	16.60 20.99	0	16.78 18.43	9.07	5.15 7.55	0			0.02	0.01	0.0013779 0.0014036	0.0025124
58* 19		15.38		57.69	5	4			26 11.6			0 0.38	2.17	0.10	0 2.656	34.70	33.96	31.35	0	9.02	8.83	8.15	0).35	0.28	0.0014125	0.0005318
59* 14 60* 17		14.29 11.76	0.00	71.43	3	2	0 5	5 7	7 75.4 7 85.5		0.52 4.61	0 2.70 0 8.10	1.00	0.01	0 3.483 0 9.543	56.66 48.79	23.15 41.16	20.19	0	3.97 8.29	7.00	1.41	0).14).29	0.12	0.0010082 0.0028337	0.0007762 0.0016832
61* 13				46.67	2	3	3 7	7 1	5 26.0			0 1.11	2.61	0.76	0 4.471	41.29	31.19	27.52	0	6.19	4.68	4.13	0).26	0.21	0.0003449	0.0010515
62* 14 63* 28		14.29 28.57	7.14 7.14	64.29 35.71	4	4	1 9		4 19.1 4 26.4			0 1.69 0 1.13	5.23 1.83	1.63	0 8.550 0 4.334	52.84 49.51	24.21	22.95 21.67	0	7.40 6.93	3.39 4.03	3.21	0).09).15	0.09	0.0018633 0.0006349	0.0016542 0.0017187
164 55			2.78	31.94	40	7	2 2		⁷ 2 78.3			0 10.20	2.84	0.07	0 13.102		18.56	12.84	0	49.39	13.37	9.24	0	72		0.00	0.00	0.0032371	0.0114042
165 88 166* 37		0.00 25.00	0.00	11.11 25.00	16	0	0 2	2 18	8 97.2 8 38.8		0.55 1.47	0 3.12 0 2.01	0.09 3.25	0.02	0 3.227 0 5.351	97.70 50.62	2.30	0.00 21.88	0	17.59 4.05	2.20	0.00 1.75	0	18		0.00	0.00	0.0102800 0.0014088	0.0163790 0.0103519
67* 21				57.14	3	2	1 8	8 1	4 32.1			0 2.92	3.93	2.13	0 8.975	51.62	37.07	11.31	0	7.23	5.19	1.58	0).20	0.06	0.0001285	0.0073924
68* 21 69* 18		32.14 37.50	10.71 6.25	35.71 37.50	6	9	3 10		6 16.5		9.25	0 17.40 0 2.42	6.02 7.31	2.42 4.90	0 25.838 0 14.634	36.23 28.58	36.98 43.90	26.78 27.52	0	10.15 4.57	10.36 7.02	7.50 4.40	0	28 16).43).62	0.18	0.0008738 0.0002291	0.0029875 0.0019906
170 36		9.09	0.00	54.55	4	1	0 6		1 31.2			0 5.29	8.99	2.70	0 16.976	68.05	20.99	10.96	0	7.48	2.31	1.21	0	11		0.02	0.01	0.0005612	0.0015300
171 90 172 37		0.00	0.00	9.09	11	0	0 4		91.2		0.06 18.21	0 17.48 0 6.91	1.69 8.68	0.01 3.47	0 19.179 0 19.060	97.48 52.13	1.44 28.62	1.08 19.25	0	42.89 15.12	0.63 8.30	0.48 5.58	0	29		0.00	0.00	0.0115656 0.0008328	0.0300870 0.0084055
172 3 <i>7</i> 173 26		4.35		69.57	6	1	0 1		23 79.9			0 6.95	1.50	0.28	0 8.729	52.24	26.13	21.63	0	12.02	6.01	4.97	0			0.05	0.04	0.0008741	0.0040892
74* 20 75* 19		28.00 11.54	16.00 0.00	36.00 69.23	5	7	0 1		.5 18.6 .6 89.4			0 0.560 3.10	1.87 0.40	0.06	0 2.4920 3.496	33.66 46.56	39.08 38.23	27.27 15.22	0	8.41 12.10	9.77 9.94	6.82 3.96	0	25 26).51).24	0.19	0.0000010 0.0004147	0.0015332 0.0023509
75* 19 76* 29				45.83	7	4	2 1		24 50.6			0 4.54	3.38	1.00	0 3.496	49.86	32.53	17.61	0	11.97	7.81	4.23	0			0.24	0.05	0.0004147	0.0023509
177* 15 178 35		15.79 2.08		55.26 60.42	12 17	12 1			76 35.0 18 51.6			0 4.47 0 3.94	5.18 1.92	3.07 1.84	0 12.730 0 7.698	33.33 67.43	34.98 21.46	31.69 11.11	0 0	25.33 32.37	26.59 10.30	24.08 5.33	0 0	76 48).42).00	0.26	0.0004316 0.0019982	0.0015993 0.0085089
178 33 179 91		0.00	0.00	8.33	11	0	0 1	1 1	2 85.6		4.56	0 16.77	1.94	0.92	0 19.622		5.00	3.33	0	11.00	0.60	0.40	0	12	1 (0.00	0.00	0.0104114	0.0089268
80* 12 81* 16				55.32 48.84	7	9			43.8 43 32.7			0 4.17 0 1.01	3.05 1.74	2.23 0.54	0 9.453 0 3.282	36.50 38.63	36.47 36.94	27.03 24.43	0	17.15 16.61	17.14 15.88	12.70 10.50	0).42).39	0.15	0.0005317 0.0008504	0.0028954
182 76	5.47			17.65	13	1	0 3		7 79.7			0 5.40	1.44	0.01	0 6.847	85.20	8.20	6.60	0	14.48	1.39	1.12	0	17		0.00	0.00	0.0077043	0.0078431
183 87 84* 32		0.00 32.35	0.00 17.65	12.50 17.65	35 11	11	0 5 6 6		97.6 4 40.8			0 28.520 2.54	0.69 2.09	0.02 1.46	0 29.2340 6.083	92.36 40.69	4.31 36.50	3.33 22.82	0	36.94 13.83	1.73 12.41	1.33 7.76	0	40 34		0.00	0.00	0.0087224 0.0000733	0.0216070 0.0032279
85* 23	3.08			23.08	6	7	7 6	6 20	69.5	2 25.03		0 8.44	3.00	0.67	0 12.113		27.39	27.27	0	11.79	7.12	7.09	0		0.76).12	0.12	0.0006773	0.0016201
186 58 187 84			0.00	29.41 15.38	10	0	0 5	5 1 ⁻¹	7 31.23 1.40			0 0.680 0.02	0.95	0.36	0 1.9850 0.177	67.09 97.31	23.89 2.56	9.02 0.12	0	11.41 12.65	4.06 0.33	1.53 0.02	0	17 13		0.01	0.00	0.0026283 0.0070851	0.0136757 0.0182369
188 53	3.13	12.50	3.13	31.25	17	4	1 1	10 32	32 42.6			0 4.60	3.52	2.70	0 10.820		24.98	9.38	0	21.01	7.99	3.00	0	32	1 (0.00	0.00	0.0003049	0.0089156
189 58 190* 29		20.83 29.41	8.33 29.41	12.50 11.76	14 5	5	257	3 24 2 1	7 61.4		0.00	0 0.070 1.41	8.37 1.03	0.00	0 8.4460 2.439	62.44 34.31	29.06 33.33	8.49 32.35	0	14.99 5.83	6.98 5.67	2.04 5.50	0			0.01	0.00	0.000010 0.0008947	0.0050717 0.0002094
191 83			0.00	16.67	25	0	0 5		80 82.2			0 6.59	1.08	0.36	0 8.039	92.14	4.34	3.53	0	27.64	1.30	1.06	0	30	1 (0.00	0.00	0.0093889	0.0180268
192 60 193* 23		6.67 19.05	6.67 9.52	26.67 47.62	9 5	1 4	1 4 2 1		5 76.3 21 14.2			0 7.360 1.47	2.00 4.72	0.27 4.19	0 9.6250 10.383	78.27 48.26	13.40 30.71	8.33 21.03	0	11.74 10.13	2.01 6.45	1.25 4.42	0	15 21		0.00	0.00	0.0047977 0.0003177	0.0120211
94* 24				57.58	8	4	2 1	19 3:	33 41.9	9 32.54	25.47	0 6.05	4.77	3.78	0 14.597	39.52	38.16	22.32	0	13.04	12.59	7.37	0		0.49).41	0.11	0.0010915	0.0033915
95* 5. 96* 12			8.11 7.50	70.27 72.50	5	3	_		37 28.1 40 12.7			0 2.33 0 2.20	4.13 8.34	1.72 6.29	0 8.182 0 16.826	33.21 39.83	37.25 32.69	29.53 27.48	0	12.29 15.93	13.78 13.08	10.93 10.99	0).48).24	0.22	0.0007535 0.0002448	0.0017600 0.0014402
197 40		14.81	7.41	37.04	11	4	2 1	10 2	27 60.6			0 23.05	13.28	1.77	0 38.091	55.41	25.69	18.91	0	14.96	6.94	5.10	0			0.02	0.13	0.0025990	0.0014402
98* 20 199 60			6.90	55.17 10.00	6	5	2 10 1 1		29 36.8 0 99.6			0 2.86 0 2.81	4.11 0.01	0.00	0 8.055 0 2.826	44.84 63.33	39.66 26.67	15.51 10.00	0	13.00 6.33	11.50 2.67	4.50 1.00	0).31).06	0.05	0.0011000 0.0041422	0.0015808 0.0018585
		0.00			4	0	0 0	0 4			11.33		2.99	1.60		100.00		0.00	0	4.00	0.00	0.00	0			0.00	0.03	0.0041422	0.0016565
201 100 202* 25			0.00	0.00 41.67	10 ร	0	0 0		78.8220.8			0 27.970 2.84	4.53 8.22	2.98 2.78	0 35.485 0 13.838		0.00 49.80	0.00 5.86	0 n	10.00 5.32	0.00 5.98	0.00 0.70	0 n	10 12).00).58	0.00	0.0224385 0.0008168	0.0224359 0.0055672
203 57				42.86	4	0	0 3	3 7	7 62.2			0 3.12	1.37	0.32	0 4.798	73.81	21.11	5.08	0	5.17	1.48	0.76	0			0.03	0.00	0.0008108	0.0033072
204* 41 205 100			17.65 0.00	0.00	7	7	3 0	0 1	7 32.2 7 82.1			0 6.54 0 32.61	8.25 3.81	5.48 3.27	0 20.265 0 39.682		41.18 0.00	17.65 0.00	0	7.00 7.00	7.00	3.00 0.00	0	17 7		0.45	0.10	0.0021632 0.0090568	0.0054034 0.0109567
205 TOC 206 94			0.00	5.88	16	0	0 1	- / 1 1 [*]	7 62.4			0 32.61	4.68	1.97	0 39.682		1.96	0.00	0	16.67	0.33	0.00	0	17		0.00	0.00	0.0090568	0.0109567
207 100 208* 75			0.00	0.00	13 3	0	0 0	0 1:	3 97.84 91.0			0 89.70 0 5.45	1.00 0.40	0.97 0.19	0 91.678 0 6.042	100.00 75.00	0.00 25.00	0.00	0 n	13.00 3.00	0.00	0.00	0 n	13 4		0.00	0.00	0.0198440 0.0067398	0.0220581 0.0041901
209 100			0.00	0.00	5	0	0 0	0 5	5 81.9			0 30.40	4.00	2.72	0 37.128			0.00	0	5.00	0.00	0.00	0			0.00	0.00	0.0007398	0.0041901