

	mutation rate per Chandler																																				
	0.00076 0.00311 0.00151 0.00265 0.00226 0.00226 0.00009 0.00022 0.00477 0.00186 0.00052 0.00242 0.00814 0.00132 0.00132 0.00016 0.00016 0.00016 0.00264 0.00099 0.00135 0.00838 0.00566 0.00566 0.00566 0.00566 0.00402 0.00208 0.00123 0.00123 0.00735 0.00411 0.01022 0.00790 0.03531 0.03531 0.00324 0.00055																																				
ID	DYS393	DYS390	DYS19	DYS391	DYS385	DYS426	DYS388	DYS439	DYS389-1	DYS392	DYS389-2	DYS458	DYS459	DYS455	DYS454	DYS447	DYS437	DYS448	DYS449	DYS464	DYS460	GATA-H4	YCA-II	DYS456	DYS607	DYS576	DYS570	CDY	DYS442	DYS438							
Ewing	13	25	15	11	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	18	16	18	17	37	38	11	12
Group 1*	13	25	15	11	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	18	16	18	17	37	38	11	12
1a,1b,1c,1d	13	25	15	11	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	18	16	18	17	37	38	11	12
Group 1e	13	25	15	11	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	18	16	18	17	36	39	11	12
Group 1f	13	25	15	11	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	16	18	17	36	38	11	12	
Group 1g	13	25	15	11	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	30	15	16	16	17	11	11	19	23	18	16	18	17	37	38	11	12
Group 2*,2b	13	25	15	10	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	18	16	18	17	37	38	11	12
Group 2a	13	25	15	10	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	23	18	16	18	17	35	37	11	12
Group 2d	13	25	15	10	11	13	12	12	13	13	14	29	17	9	10	11	11	25	15			15	16	16	17	11	11	19	23	18	16		17		38	11	12
JNM	13	25	14	11	11	12	12	12	13	13	14	29	17	9	10	11	11	25	15	18	31	15	16	16	17	11	11	19	19	17	16	19	17	37	39	11	12
R:M222	13	25	14	11	11	13	12	12	12	13	14	29	17	9	10	11	11	25	15	18	30	15	16	16	17	11	11	19	23	17	16	18	17	38	39	12	12
R1b1b2	13	24	14	11	11	14	12	12	12	13	13	29	17	9	10	11	11	25	15	19	29	15	15	17	17	11	11	19	23	15	15	18	17	37	38	12	12
Group 3a	13	25	14	11	11		12	12	12	13	14	29	18	9	10	10	11	25	15	18	30	15	16	16	17	11	11	19	23	16	16		17		38	12	12
Group 3b	13	25	14	11	11	13	12	12	12	13	14	29	17	9	10	11	11	24	15	18	30	15	16		17	11		19	23	16	16	17	17	37	38	12	12
Group 4*	13	24	14	10	11	14	12	12	12	13	13	29	18	9	10	11	11	25	15	19	29	15	15	17	17	11	11	19	23	16	15	18	17	36	38	12	12
Group 4a	13	24	15	11	11	15	12	12	12	12	13	28	18	9	10	11	11	25	15	19	29	15	15	17	17	11	12	19	23	16	14	18	17	36	38	12	12
R1bSTR47	13	24	14	10	11	14	12	12	12	13	13	30	18	9	10	11	11	25	15	19	30	15	15	17	17	11	12	19	24	16	15	18	17	37	38	12	12
Group 4b	13	24	14	10	11	14	12	12	12	13	13	29	18	9	10	11	11	25	15	19	30	13	15	17	17	11	10	19	23	16	15	18	18	38	12	12	
Group 4c	13	24	14	11	10	15	12	12	12	13	13	29	18	9	10	11	11	25	15	19	29	15	15	17	18	11	11	19	23	16	13	17	17	35	36	12	12
Group 4d	13	24	14	10	12	15	13	12	12	13	13	29	17	9	10	11	11	25	15	19	28	15	15	16	18	10	10	19	23	15	15	18	17	36	37	12	12
Group 5a	15	22	16	10	14	14	11	13	11	12	12	29	18	8	10	11	11	22	15	20	31	11	15	15	15	11	11	19	21	14	15	17	18	33	38	12	10

Irish III

11

8 9

13 13 15 17

15

Cullen predictor results (<http://members.bex.net/jtcullen515/haplotest.htm>)

M222+ R1b-N.Irish =>50% R1b-M222 (NW Irish) =>50%

R1b1b2 R1b =>97% R1b-S28 =>2%

Ewing R1b-N.Irish =>50% R1b-M222 (NW Irish) =>50%

Group 4a R1b =>66% R1b-S28 =>14% R1b-S29-Frisian2 =>9% R1b-C.Europe =>4% R1b-Frisian =>1% R1b-S.Irish =>1% R1b-S21* =>1% R1b-Leinster =>1% R1b-S21-Scottish =>1%

Group 4b R1b-S28 =>36% R1b =>33% R1b-S21-Scottish =>13% R1b-North/South 1 =>5% R1b-Ub =>5% R1b-Leinster =>2% R1b-North/South 2 =>1% R1b-Frisian =>1% R1b-S.Irish =>1% R1b-Irish/Continental =>1%

Group 4c R1b-S29-Frisian2 =>41% R1b =>37% R1b-S28 =>12% R1b-Frisian =>3% R1b-Irish/Continental =>2% R1b-S21* =>2% R1b-Leinster =>2%

Group 4d R1b-Irish/Continental =>100%

JM3 R1b-Ub =>70% R1b =>13% R1b-C.Europe =>7% R1b-S28 =>3% R1b-E.Europe =>2% R1b-S26 =>2% R1b-IrishIII =>1%

Note: modals for the R1b clusters Cullen speaks about were derived by Ken Nordtvedt and can be seen at <http://www.irishtype3dna.org/KenNordtvedt.htm>.