

Table S1 Haplogroup diversity in the Thai population (based on classification of HVI and HVII sequence data).

Region and mutation site					
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2	
TH001	C179	M12b2	16129A 16172C 16223T 16290T 16305G 16325C 16354T	73G 152C 153G 263G 309.1C 315.1C	
TH002	N187	A	16189C 16223T 16263C 16288C 16290T 16319A	73G 151T 152C 235G 263G 309.1C 315.1C	
TH003	C313	A5b1	16126C 16186T 16223T 16235G 16290T 16319A	73G 152C 235G 263G 315.1C	
TH004	N195	A4	16223T 16274A 16290T 16319A 16362C	73G 152C 235G 263G 309.1C 315.1C	
TH005	C274	A4	16129A 16223T 16290T 16291T 16319A 16362C	73G 152C 235G 263G 315.1C	
TH006	N211	A4	16166G 16223T 16290T 16319A 16362C	73G 152C 200G 204C 235G 263G 309.1C 315.1C	
TH007	N218	A4	16166G 16223T 16290T 16319A 16362C	73G 152C 200G 235G 263G 309.1C 315.1C	
TH008	N241	A4	16166G 16223T 16290T 16319A 16362C	73G 152C 200G 235G 263G 309.1C 315.1C	
TH009	NE264	A4d	16223T 16290T 16319A 16362C	73G 151T 152C 200G 235G 263G 315.1C	
TH010	C182	M	16183C 16189C 16209C 16223T	73G 263G 309.1C 309.2C 315.1C	
TH011	N198	B6a1a	16051G 16183C 16189C 16354T	73G 263G 315.1C	
TH012	S300	M12a1b	16155G 16172C 16182C 16183C 16189C 16223T 16234T 16290T	73G 125C 127C 263G 315.1C	
TH013	C23	B4a1	16182C 16183C 16189C 16217C	73G 146C 263G 309.1C 309.2C 315.1C	
TH014	C24	B4a1	16182C 16183C 16189C 16217C 16261T 16299G	73G 193G 263G 309.1C 309.2C 315.1C	
TH015	NE103	B4a1	16182C 16183C 16189C 16217C 16240G 16261T	73G 263G 315.1C	
TH016	S130	B2g	16189C 16217C 16223T 16319A	73G 114G 131C 195A 263G 315.1C	
TH017	N204	B4	16129A 16182C 16183C 16189C 16217C 16262T	73G 263G 272G 309.1C 309.2C 315.1C	
TH018	S42	B4a1a	16182C 16183C 16189C 16217C 16261T 16355T	73G 146C 263G 309.1C 309.2C 315.1C	
TH019	S51	B4a1a	16182C 16183C 16189C 16217C 16218T 16224C 16261T 16304C	73G 146C 152C 263G 315.1C	
TH020	S168	B4a1a	16168T 16182C 16183C 16189C 16217C 16261T 16311C	73G 146C 263G 309.1C 309.2C 315.1C	
TH021	C181	B4a1a	16093C 16182C 16183C 16188T 16189C 16214T 16217C 16261T	73G 146C 263G 309.1C 315.1C	
TH022	N194	B4a1a	16129A 16182C 16183C 16189C 16217C 16261T	73G 146C 263G 309.1C 309.2C 315.1C	
TH023	C312	B4a1a	16093C 16125A 16182C 16183C 16189C 16217C 16261T	73G 146C 263G 309.1C 315.1C	
TH024	N141	B4b1	16136C 16182C 16183C 16189C 16217C 16270T 16298C	73G 150T 152C 263G 310C	
TH025	N247	B4b1	16136C 16183C 16189C 16217C	73G 199C 263G 315.1C	
TH026	N239	B4b1a2a	16136C 16182C 16183C 16189C 16217C 16309G 16354T	73G 207A 263G 315.1C	
TH027	S32	B4c1b2a	16140C 16182C 16183C 16189C 16217C 16274A 16311C 16335G	73G 146C 150T 263G 309.1C 309.2C 315.1C	
TH028	S132	B4c1b2a	16140C 16182C 16183C 16189C 16217C 16274A 16311C 16335G	73G 146C 150T 263G 309.1C 309.2C 315.1C	
TH029	S33	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 263G 309.1C 315.1C	
TH030	S41	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 263G 309.1C 315.1C	
TH031	S68	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 263G 309.1C 315.1C	
TH032	NE82	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 114G 152C 263G 309.1C 315.1C	

Region and mutation site					
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2	
TH033	NE149	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 263G 315.1C	
TH034	NE157	B4c2	16147T 16183C 16184A 16189C 16217C 16235G 16295T	73G 263G 315.1C	
TH035	C162	B4c2	16147T 16183C 16184A 16189C 16217C 16235G 16311C	73G 185A 189G 263G 309.1C 315.1C	
TH036	N206	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 152C 195C 263G 309.1C 315.1C	
TH037	NE268	B4c2	16147T 16183C 16184A 16189C 16217C 16235G	73G 150T 263G 309.1C 315.1C	
TH038	NE120	B4g	16181C 16182C 16183C 16189C 16213A 16217C 16261T 16292T	73G 263G 309.1C 315.1C	
TH039	NE140	B4g	16181C 16182C 16183C 16189C 16213A 16217C 16242T 16261T 16292T 16301T	73G 150T 263G 308D 310D	
TH040	NE265	B4g	16181C 16182C 16183C 16189C 16213A 16217C 16261T 16292T	73G 263G 309.1C 315.1C	
TH041	NE304	B4g	16181C 16182C 16183C 16189C 16213A 16217C 16261T 16292T	73G 263G 309.1C 315.1C	
TH042	N27	B5a	16140C 16183C 16189C 16266A	73G 146C 210G 263G 315.1C	
TH043	C28	B5a	16140C 16183C 16189C 16266A	73G 146C 210G 263G 309.1C 309.2C 315.1C	
TH044	S30	B5a	16140C 16182C 16183C 16189C 16266A	73G 210G 234G 263G 309.1C 315.1C	
TH045	S34	B5a	16111T 16129A 16140C 16182C 16183C 16189C 16266A	73G 146C 210G 263G 315.1C	
TH046	S54	B5a	16140C 16182C 16183C 16189C 16266A	73G 210G 263G 309.1C 315.1C	
TH047	S60	B5a	16140C 16183C 16189C 16266A 16362C	73G 146C 210G 263G 309.1C 315.1C	
TH048	NE62	B5a	16093C 16140C 16183C 16189C 16243C 16266A	73G 210G 263G 315.1C	
TH049	S74	B5a	16140C 16183C 16189C 16266A 16362C	73G 146C 210G 263G 309.1C 315.1C	
TH050	NE85	B5a	16140C 16182C 16183C 16189C 16266A	73G 210G 263G 307D 310D 311D	
TH051	C106	B5a	16140C 16183C 16189C 16192T 16266A	73G 210G 263G 315.1C	
TH052	C108	B5a	16183C 16189C 16266A 16298C	73G 210G 263G 309.1C 309.2C 315.1C	
TH053	N136	B5a	16140C 16183C 16189C 16266A 16294T	73G 149Y 185A 189G 263G 309.1C 315.1C	
TH054	C147	B5a	16140C 16183C 16189C 16266A	73G 210G 263G 309.1C 315.1C	
TH055	N188	B5a	16140C 16183C 16189C 16266A	73G 195C 210G 263G 309.1C 309.2C 315.1C	
TH056	N189	B5a	16140C 16183C 16189C 16209C 16266A	73G 210G 263G 315.1C	
TH057	NE279	B5a	16140C 16148T 16183C 16189C 16266A 16326G	73G 210G 263G 309.1C 309.2C 315.1C	
TH058	C280	B5a	16140C 16183C 16189C 16193.1C 16266A	73G 210G 263G 309.1C 309.2C 315.1C	
TH059	S281	B5a	16140C 16183C 16189C 16193.1C 16266A	73G 210G 263G 315.1C	
TH060	C285	B5a	16140C 16182C 16183C 16189C 16209C 16266A	73G 210G 263G 310D 311D	
TH061	NE298	B5a	16140C 16183C 16189C 16193.1C 16266A	73G 210G 263G 309.1C 309.2C 315.1C	
TH062	NE314	B5a	16140C 16183C 16189C 16193.1C 16266A	73G 210G 263G 309.1C 315.1C	
TH063	NE105	B5a1d	16140C 16182C 16183C 16189C 16261T 16266A	73G 152C 210G 263G 309.1C 309.2C 315.1C	
TH064	S127	B5a1d	16140C 16182C 16183C 16189C 16261T 16266A	73G 152C 210G 263G 309.1C 315.1C	
TH065	N196	B5a1d	16140C 16183C 16189C 16266A 16311C	73G 152C 210G 263G 309.1C 309.2C 315.1C	
TH066	N238	B5a1d	16140C 16183C 16189C 16266A 16312G	73G 152C 210G 263G 309.1C 315.1C	
TH067	C306	B5a1d	16140C 16182C 16183C 16189C 16261T 16266A	73G 152C 210G 263G 309.1C 315.1C	
TH068	NE8	B5b	16140C 16178C 16183C 16189C 16243C 16311C	73G 103A 204C 263G 309.1C 309.2C 315.1C	

Region and mutation site					
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2	
TH069	NE167	B5b	16140C 16183C 16189C 16243C 16311C	73G 204C 263G 309.1C 309.2C 315.1C	
TH070	S17	D5b1d	16183C 16189C 16223T 16304C 16362C	73G 146C 150T 263G 315.1C	
TH071	N22	M7a	16183C 16189C 16209C 16223T	73G 150T 263G 309.1C 315.1C	
TH072	NE53	D5	16182C 16183C 16189C 16223T 16362C	73G 150T 153G 263G 309.1C 309.2C 315.1C	
TH073	C79	D5b1c1	16148T 16182C 16183C 16189C 16223T 16287T 16362C	73G 150T 152C 263G 309.1C 309.2C 315.1C	
TH074	S131	M51a2	16183C 16189C 16223T 16278T	73G 150T 263G 309.1C 309.2C 315.1C	
TH075	S56	C4a1	16223T 16298C 16327T	73G 195C 249D 263G 309.1C 315.1C	
TH076	C78	C4a3b	16223T 16298C 16311C 16327T 16357C	73G 249D 263G 310C	
TH077	NE86	C7a	16223T 16298C 16327T	73G 249D 263G 315.1C	
TH078	C112	C7	16093C 16172C 16223T 16298C 16327T	73G 249D 263G 315.1C	
TH079	C184	C7a	16189C 16223T 16298C 16327T 16357C	73G 249D 263G 309.1C 309.2C 315.1C	
TH080	N233	C7a	16223T 16298C 16327T	73G 249D 263G 309.1C 315.1C	
TH081	C256	C7	16093C 16172C 16223T 16298C 16327T	73G 249D 263G 309.1C 315.1C	
TH082	C260	C4c1	16223T 16298C 16327T	73G 189G 207A 249D 263G 315.1C	
TH083	C275	C4a1	16129A 16148T 16223T 16298C 16327T	73G 152C 249D 263G 315.1C	
TH084	N290	C7a2	16189C 16223T 16298C 16327T	73G 207A 249D 263G 309.1C 315.1C	
TH085	C291	C7a2	16223T 16298C 16327T	73G 249D 263G 315.1C	
TH086	C154	M	16093C 16140C 16172C 16189C 16223T 16238C 16278T	73G 249D 263G 309.1C 315.1C 319C	
TH087	N212	C7a1	16223T 16274A 16327T	73G 146C 195C 228T 249D 263G 315.1C	
TH088	N213	C7a1	16223T 16263C 16298C 16327T	73G 146C 195C 228A 249D 263G 315.1C	
TH089	N220	C7a1	16223T 16263C 16298C 16327T	73G 146C 195C 228A 249D 263G 315.1C	
TH090	C100	D4j	16171G 16223T 16311C 16362C	73G 228A 263G 309.1C 315.1C	
TH091	C4	D4	16129A 16223T 16362C	73G 152C 263G 315.1C	
TH092	C14	D4	16223T 16311C 16362C	73G 152C 263G 269T 315.1C	
TH093	C29	D4a	16129A 16223T 16249C 16278T 16311C 16362C	73G 152C 263G 309.1C 309.2C 315.1C	
TH094	N118	R2	16071T 16126C 16362C	73G 152C 263G 309.1C 315.1C	
TH095	NE128	D6c	16189C 16223T 16294T 16311C 16362C	73G 152C 263G 309.1C 315.1C	
TH096	C174	D4	16223T 16311C 16362C	73G 152C 200G 263G 315.1C	
TH097	N246	D4	16129A 16223T 16362C	73G 146C 152C 263G 309.1C 315.1C	
TH098	S64	D4b1	16185T 16189C 16223T 16232A 16319A 16362C	73G 263G 315.1C	
TH099	C109	D4b1	16185T 16189C 16223T 16232A 16319A 16362C	73G 263G 315.1C	
TH100	C21	F1a	16129A 16172C 16304C	73G 249D 263G 315.1C	
TH101	C25	F1a	16172C 16304C	73G 249D 263G 309.1C 309.2C 315.1C	
TH102	S69	F1a	16129A 16172C 16295T 16297C 16304C	73G 249D 263G 309.1C 315.1C	
TH103	N72	F1a	16129A 16304C	73G 249D 263G 309.1C 309.2C 315.1C	
TH104	NE83	F1a	16129A 16172C 16304C	73G 249D 263G 315.1C	

Region and mutation site				
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2
TH105	NE94	F1a	16172C 16304C	73G 200G 207A 249D 263G 309.1C 315.1C
TH106	N117	F1a	16129A 16172C 16192T 16304C	73G 249D 263G 309.1C 309.2C 315.1C
TH107	NE143	F1a	16129A 16172C 16192T 16304C	73G 249D 263G 315.1C
TH108	N199	F1a	16092C 16129A 16172C 16304C	73G 189G 204C 207A 249D 263G 309.1C 315.1C
TH109	N201	F1a	16129A 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH110	N226	F1a	16093C 16129A 16172C 16294T 16304C 16362C	73G 152C 249D 263G 309.1C 315.1C
TH111	N234	F1a	16129A 16172C 16304C 16320T	73G 146C 195C 249D 263G 315.1C
TH112	N244	F1a	16129A 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH113	NE104	F1a1	16129A 16162G 16172C 16304C	73G 249D 263G 315.1C
TH114	N203	F1a1	16093C 16129A 16162G 16168T 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH115	N286	F1a1	16129A 16150T 16162G 16172C 16304C	73G 249D 263G 315.1C
TH116	C296	F1a1	16129A 16162G 16172C 16186T 16193T 16242T 16243C 16304C	73G 151T 200G 249D 263G 309.1C 315.1C
TH117	C3	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 150T 195C 249D 263G 315.1C
TH118	C6	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 150T 195C 249D 263G 315.1C
TH119	NE16	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH120	S35	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH121	S63	F1a1a	16108T 16129A 16162G 16172C 16278T 16304C	73G 249D 263G 309.1C 315.1C
TH122	NE93	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 315.1C
TH123	C102	F1a1a	16108T 16129A 16162G 16172C 16256T 16304C	73G 249D 263G 293C 309.1C 315.1C
TH124	C114	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH125	NE129	F1a1a	16108T 16129A 16162G 16172C 16284G 16304C	73G 185A 249D 263G 309.1C 315.1C
TH126	NE144	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH127	NE156	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 315.1C
TH128	C169	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 183G 249D 263G 309.1C 315.1C
TH129	C176	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 152C 249D 263G 315.1C
TH130	N186	F1a1a	16108T 16129A 16162G 16172C 16304C 16362C	73G 249D 263G 309.1C 315.1C
TH131	N191	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH132	N209	F1a1a	16108T 16129A 16162G 16172C 16270T 16304C	73G 249D 263G 315.1C
TH133	N210	F1a1a	16108T 16129A 16162G 16172C 16270T 16304C	73G 249D 263G 315.1C
TH134	N217	F1a1a	16108T 16129A 16162G 16172C 16270T 16304C	73G 249D 263G 315.1C
TH135	N219	F1a1a	16108T 16129A 16162G 16172C 16270T 16304C	73G 200G 249D 263G 315.1C
TH136	N227	F1a1a	16108T 16129A 16162G 16172C 16270T 16304C	73G 249D 263G 315.1C
TH137	N248	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 152C 249D 261A 263G 309.1C 315.1C
TH138	NE282	F1a1a	16108T 16129A 16162G 16172C 16256T 16294T 16304C	73G 195C 249D 263G 309.1C 315.1C
TH139	N289	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 309.1C 315.1C
TH140	NE297	F1a1a	16108T 16129A 16162G 16172C 16256T 16304C	73G 249D 263G 293C 309.1C 315.1C

Region and mutation site					
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2	
TH141	N299	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 249D 263G 315.1C 384G	
TH142	C305	F1a1a	16108T 16129A 16162G 16172C 16304C	73G 152C 249D 263G 309.2C 315.1C	
TH143	C121	F1b1b	16172C 16183C 16189C 16232A 16249C 16304C 16311C	73G 152C 204C 215G 249D 263G 309.1C 309.2C 315.1C	
TH144	C262	F1e3	16042A 16051G 16189C 16269G 16292T 16300G 16304C 16311C	73G 150T 195C 234G 249D 263G 315.1C	
TH145	C308	F1c1a1	16111T 16129A 16266T 16304C	73G 152C 249D 263G 309.1C 315.1C	
TH146	C258	F1d	16183C 16189C 16300G 16304C	73G 146C 150T 195C 198T 249D 263G 309.1C 309.2C 315.1C	
TH147	N237	F2d	rCRs	73G 195C 235G 249D 263G 315.1C	
TH148	C180	G1a	16092C 16223T 16362C	73G 150T 263G 309.1C 315.1C	
TH149	C1	G1a1	16223T 16325C	73G 150T 263G 315.1C	
TH150	C178	G1a2	16051G 16184T 16223T 16290T 16362C	73G 263G 309.1C 315.1C	
TH151	S44	G2a1d	16192T 16223T 16278T 16362C	73G 260A 263G 309.1C 315.1C	
TH152	S55	M26	16214A 16223T 16278T	73G 152C 195C 204C 263G 309.1C 315.1C	
TH153	N97	G2a	16223T 16278T 16362C	73G 195C 263G 315.1C	
TH154	S134	D4g1	16086C 16223T 16278T	73G 263G 309.1C 315.1C	
TH155	N214	G2a	16223T 16278T 16362C	73G 195C 263G 315.1C	
TH156	N221	G2a	16223T 16278T 16362C	73G 195C 263G 315.1C	
TH157	N223	G2a	16223T 16278T 16362C	73G 195C 263G 315.1C	
TH158	N225	G2a	16223T 16278T 16362C	73G 195C 263G 315.1C	
TH159	N231	G2a	16223T 16278T 16362C	73G 195C 263G 315.1C	
TH160	S303	M68a	16223T 16255A 16259T 16278T 16362C	73G 263G 291D 292D 293D 294D 309.1C 315.1C	
TH161	S159	M	16111T 16223T 16231C 16272G 16362C	73G 263G 315.1C	
TH162	N229	M26	16214A 16223T 16234T 16278T	73G 152C 185A 189G 195C 263G 315.1C	
TH163	N160	M	16223T 16274A 16362C	73G 263G 309.1C 315.1C	
TH164	NE84	M	16223T 16362C	73G 146C 210G 263G 309.1C 309.2C 315.1C 328G	
TH165	C111	M	16223T 16362C	73G 263G 315.1C	
TH166	NE89	N22	16168T 16223T 16249C	73G 146C 150T 177C 263G 315.1C	
TH167	C142	N22	16093C 16168T 16223T 16249C	73G 177C 263G 315.1C	
TH168	N230	M91a	16086C 16129A 16223T 16287T 16311C 16327A	73G 93G 200G 204C 263G 315.1C	
TH169	S73	M34a	16223T 16249C 16309G 16359C	73G 114G 152C 263G 309.1C 315.1C	
TH170	C150	M17c1a1	16209C 16223T 16233G 16274A 16304C	73G 143A 263G 291.1A 291.2A 291.3A 309.1C 315.1C	
TH171	N38	M38	16189C 16223T 16256T	73G 239C 246C 263G 309.1C 315.1C	
TH172	S125	M38	16189C 16223T 16256T	73G 239C 246C 263G 309.1C 309.2C 315.1C	
TH173	S39	M3a1	16126C 16223T	73G 146C 204C 248G 263G 309.1C 309.2C 315.1C	
TH174	S36	M3c	16126C 16189C 16223T	73G 150T 152C 195C 263G 315.1C	
TH175	NE67	M	16093C 16223T 16311C 16362C	73G 215G 263G 315.1C	
TH176	S70	M7b1	16129A 16223T	73G 146C 150T 228A 263G 315.1C	

Region and mutation site				
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2
TH177	NE75	M7b1a1	16129A 16223T 16297C	73G 150T 199C 263G 315.1C
TH178	NE88	M7b1a1	16129A 16192T 16223T 16297C 16362C	73G 150T 199C 263G 309.1C 315.1C
TH179	C151	M7b	16223T 16297C	73G 143A 263G 309.1C 315.1C
TH180	NE158	M7b1a1	16129A 16192T 16223T 16297C	73G 150T 199C 263G 309.1C 315.1C
TH181	NE171	M5c1	16129A 16223T 16286T	73G 146C 150T 263G 315.1C
TH182	C173	M7b1a1	16129A 16192T 16223T 16297C	73G 150T 157C 199C 263G 309.1C 315.1C
TH183	C177	M7b1a1	16129A 16223T 16297C	73G 150T 199C 263G 315.1C
TH184	N208	M7b1a1a	16129A 16189C 16192T 16223T 16297C	73G 150T 199C 263G 315.1C
TH185	N215	M7b1a1	16129A 16192T 16223T 16297C 16311C	73G 150T 182T 199C 263G 309.1C 315.1C
TH186	N224	M7b1a1	16113C 16129A 16192T 16223T 16297C 16304C 16311C	73G 150T 189G 199C 263G 309.1C 309.2C 315.1C
TH187	NE254	M7b1a1	16129A 16192T 16292T 16297C	73G 150T 157C 199C 263G 315.1C 316A
TH188	NE81	M5c1	16086C 16223T	73G 150T 263G 309.1C 315.1C
TH189	N9	M7b4	16223T 16297C	73G 150T 199C 204C 263G 315.1C
TH190	N13	M7b4	16129A 16189C 16223T 16297C	73G 150T 199C 204C 207A 263G 315.1C
TH191	C76	M7b4	16223T 16297C 16327T	73G 150T 199C 204C 263G 315.1C
TH192	NE90	M7b4	16129A 16192T 16223T 16297C	73G 150T 199C 204C 263G 309.1C 315.1C
TH193	NE95	M7b4	16129A 16189C 16192T 16223T 16297C	73G 150T 199C 204C 263G 309.1C 309.2C 315.1C 332T
TH194	NE170	M7b4	16223T 16297C	73G 150T 199C 204C 263G 315.1C
TH195	N242	M7b4	16129A 16189C 16223T 16297C	73G 150T 199C 204C 263G 315.1C
TH196	N249	M7b4	16129A 16189C 16192T 16223T 16297C	73G 150T 199C 204C 207A 263G 315.1C
TH197	NE292	M7b4	16129A 16189C 16223T 16297C	73G 150T 199C 204C 207A 263G 315.1C
TH198	C5	M7c	16174T 16223T 16316G 16362C	73G 199C 263G 315.1C
TH199	C7	M7c1	16223T	73G 146C 199C 263G 315.1C
TH200	S52	M7c1	16223T 16295T 16362C	73G 146C 199C 263G 309.1C 315.1C
TH201	S166	M7c1	16223T 16278T 16354T	73G 146C 199C 263G 309.1C 309.2C 315.1C
TH202	N193	M7c1	rCRS	73G 146C 199C 204C 263G 309.1C 315.1C
TH203	N207	M7c1	rCRs	73G 146C 199C 204C 263G 309.1C 315.1C
TH204	N236	M7c1	rCRs	73G 146C 199C 263G 315.1C
TH205	C263	M7c1	rCRs	73G 146C 199C 263G 309.1C 315.1C
TH206	C307	M7c1	16223T 16295T	73G 146C 152C 199C 263G 309.1C 315.1C
TH207	N197	M8a2a	16184T 16189C 16223T 16298C 16311C 16319A	73G 146C 150T 263G 309.1C 309.2C 315.1C
TH208	N251	M8a2a	16184T 16189C 16223T 16298C 16311C 16319A	73G 263G 309.1C 315.1C
TH209	NE270	M9a	16158G 16223T 16234T 16362C	73G 150T 152C 153G 263G 315.1C
TH210	S40	M9a1a1c	16093C 16176T 16223T 16291T 16362C	73G 208C 263G 309.1C 315.1C
TH211	S47	M9a1a1c	16189C 16223T 16291T 16362C	73G 263G 309.1C 315.1C
TH212	S50	M9a1a1c	16223T 16264T 16291T 16362C	73G 263G 309.1C 315.1C

Region and mutation site					
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2	
TH213	NE276	M9b	16051G 16223T 16254G 16264T 16362C	73G 215G 263G 315.1C	
TH214	C288	M9b	16051G 16223T 16254G 16264T 16362C	73G 215G 263G 315.1C	
TH215	C161	M10	16051G 16223T 16311C 16319A	73G 263G 315.1C	
TH216	NE165	M10	16172C 16223T 16274A 16291T 16311C	73G 152C 263G 315.1C	
TH217	C107	M10a	16129A 16223T 16311C	73G 263G 315.1C	
TH218	C273	M10a	16129A 16223T 16287T 16311C 16327A	64T 73G 89C 93G 189G 200G 263G 309.1C 315.1C	
TH219	S145	M10a1a	16093C 16223T 16311C	73G 152C 263G 315.1C	
TH220	C18	M10a1a2	16111T 16223T 16311C	73G 146C 152C 195C 263G 309.1C 315.1C	
TH221	S49	M10a1a2	16092C 16172C 16223T 16311C	73G 146C 263G 315.1C	
TH222	S124	M10a1a2	16092C 16172C 16223T 16311C	73G 146C 263G 315.1C	
TH223	C152	M10a1a2	16223T 16311C	73G 146C 152C 195A 198T 263G 309.1C 315.1C	
TH224	NE164	M10a1a2	16223T 16263C 16274A 16311C 16343G 16357C	73G 146C 263G 315.1C	
TH225	C266	M10a1a2	16145A 16223T 16311C	73G 146C 214G 263G 309.1C 315.1C	
TH226	C294	M10a1a2	16172C 16223T 16291T 16311C	73G 146C 263G 315.1C	
TH227	S302	M10a1a2	16172C 16223T 16274A 16311C	73G 146C 263G 315.1C	
TH228	C287	M11	16223T	73G 195C 198T 200G 215G 263G 315.1C 318C 326G	
TH229	N205	M12a1	16223T 16234T 16266T 16290T 16311C	73G 125C 127C 128T 146C 152C 263G 315.1C 318C 326G	
TH230	N250	M12a1	16223T 16234T 16290T 16362C	73G 125C 127C 128T 263G 315.1C 318C	
TH231	C26	M12b1b	16108T 16129A 16172C 16223T 16234T 16240G 16290T	73G 185A 189G 195C 263G 309.1C 315.1C	
TH232	NE115	M12b1b	16108T 16129A 16172C 16234T 16290T	73G 185A 189G 263G 309.1C 315.1C	
TH233	NE175	M12b1b	16108T 16129A 16172C 16223T 16234T 16290T	73G 185A 189G 263G 315.1C	
TH234	S65	N7a1	16051G 16063C 16129A 16166D 16172C 16223T 16318G	73G 75A 152C 263G 279C 315.1C 316A	
TH235	NE91	M20	16129A 16181G 16209C 16223T 16272G	73G 152C 225A 228A 249D 263G 309.1C 315.1C 316A	
TH236	N135	M20	16086C 16129A 16209C 16223T 16272G	73G 152C 225A 249D 263G 315.1C 316A	
TH237	N137	M20	16086C 16129A 16209C 16223T 16272G	73G 152C 225A 249D 263G 315.1C 316A	
TH238	C255	M20	16086C 16209C 16223T 16260T 16272G	73G 152C 225A 249D 263G 315.1C	
TH239	S48	M50a1	16129A 16153A 16223T 16263C 16309G	73G 204C 207A 263G 309.1C 309.2C 315.1C	
TH240	S155	M50	16187T 16223T 16259T 16263C	73G 152C 189G 207A 263G 315.1C	
TH241	N200	M71	16093C 16170G 16184T 16223T 16271C	73G 263G 309.1C 309.2C 315.1C	
TH242	S57	M71a1	16223T 16269G 16271C	73G 150T 151T 263G 309.1C 315.1C	
TH243	S113	M71a1	16223T 16269G 16271C	73G 150T 151T 263G 309.1C 315.1C	
TH244	N190	M71b	16223T 16260T 16264T 16271C	73G 151T 263G 309.1C 309.2C 315.1C	
TH245	C272	M71a1	16223T 16242T 16269G 16271C	73G 150T 151T 263G 309.1C 315.1C	
TH246	S133	M72	16166D 16214T 16223T	73G 263G 315.1C	
TH247	C126	N9a	16183C 16189C 16223T 16257A 16261T	73G 150T 263G 309.1C 315.1C	
TH248	C153	N9a	16223T 16257A 16311C	73G 150T 263G 315.1C	

Region and mutation site				
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2
TH249	N228	N9a	16223T 16257A 16261T 16311C 16319A	73G 150T 263G 309.1C 309.2C 315.1C
TH250	N252	N9a	16223T 16257A 16261T 16311C	73G 150T 263G 309.1C 309.2C 315.1C
TH251	C311	N9a	16223T 16257A 16261T 16311C	73G 150T 263G 309.1C 309.2C 315.1C
TH252	N240	N9a1	16111T 16129A 16223T 16257A 16261T 16274A	73G 150T 263G 309.1C 315.1C
TH253	NE80	N9a6	16153A 16223T 16257A 16261T 16292T	73G 150T 263G 315.1C
TH254	NE87	N9a6	16223T 16247G 16257A 16261T 16292T	73G 150T 263G 315.1C
TH255	N138	N10a	16172C 16183C 16189C 16223T 16362C	73G 185A 189G 263G 309.1C 315.1C
TH256	N216	N10a	16172C 16183C 16189C 16223T 16362C	73G 185A 189G 263G 309.1C 315.1C
TH257	N232	N10a	16183C 16189C 16193T 16223T 16362C	73G 150T 185A 309.1C 309.2C 315.1C
TH258	C278	N10a	16158G 16172C 16183C 16189C 16223T 16362C	73G 185A 189G 263G 309.1C 309.2C 315.1C
TH259	C316	N10a	16172C 16183C 16219T 16223A 16362C	73G 185A 189G 263G 309.1C 315.1C
TH260	C15	M68a	16223T 16259T 16278T 16291T 16362C	73G 185A 188G 263G 291D 292D 293D 294D 309.1C 315.1C
TH261	N96	M68a	16223T 16259T 16278T 16291T 16362C	73G 185A 188G 263G 291D 292D 293D 294D 309.1C 315.1C
TH262	N110	N10b	16069T 16172C 16223T 16271C 16274A 16278T 16291A 16298C 16362C	73G 150T 199C 263G 309.1C 315.1C
TH263	S37	N11a	16129A 16193T 16223T 16355T	73G 195C 263G 309.1C 309.2C 315.1C
TH264	NE99	N21	16124C 16193T 16223T	73G 150T 195C 263G 315.1C 337D
TH265	S283	U7a	16207G 16309G 16318T	73G 151T 152C 263G 315.1C
TH266	S43	R5a	16166G 16192T 16266T 16304C 16311C	73G 93G 263G 309.1C 315.1C
TH267	N139	R9b1a	16192T 16304C 16309G	73G 263G 309.1C 315.1C
TH268	C183	R9b1a	16304C 16309G	73G 183G 263G 315.1C
TH269	C12	R9b1a1a	16192T 16274A 16288C 16304C	73G 183G 263G 309.1C 315.1C
TH270	C20	R9b1a1a	16192T 16274A 16288C 16304C	73G 143A 183G 263G 309.1C 315.1C
TH271	S61	R9b1a1a	16086C 16170G 16223T 16288C 16304C 16309G	73G 143A 152C 183G 263G 309.1C 315.1C
TH272	NE101	R9b1a1a	16288C 16304C 16309G	73G 143A 146C 183G 204C 263G 309.1C 315.1C
TH273	N119	R9b1a1a	16288C 16304C 16309G	73G 143A 183G 259G 263G 309.1C 315.1C
TH274	N235	R9b1a1a	16192T 16288C 16304C 16309G 16320T	73G 143A 183G 263G 315.1C
TH275	C293	R9b1a1a	16192T 16274A 16288C 16304C 16309G	73G 143A 183G 263G 309.1C 315.1C
TH276	S301	R9b1a1a	16192T 16288C 16304C 16309G	73G 143A 183G 263G 309.1C 315.1C
TH277	NE11	M21d	16145A 16181G 16192T 16223T 16291T 16304C	73G 210G 263G 309.1C 315.1C
TH278	NE46	M21d	16145A 16181G 16192T 16223T 16291T 16304C	73G 210G 263G 315.1C
TH279	S66	M21d	16145A 16181G 16192T 16223T 16291T 16304C	73G 210G 263G 309.1C 315.1C
TH280	C163	M21d	16145A 16181G 16192T 16223T 16291T 16304C	73G 189G 210G 263G 309.1C 309.2C 315.1C
TH281	N19	R9b2	16304C 16362C	73G 199C 263G 315.1C
TH282	S31	R9b2	16304C 16325C 16362C	73G 263G 315.1C
TH283	N245	R9b2	16223T 16304C 16344T 16362C	73G 263G 309.1C 315.1C
TH284	C259	R9b2	16304C 16362C	73G 146C 263G 315.1C

Region and mutation site				
No.	Code*	Haplogroup	16024-16365 HV1	73-340 HV2
TH285	C271	R9b2	16304C 16362C	73G 263G 309.1C 315.1C
TH286	C284	R9b2	16092C 16304C 16362C	73G 263G 315.1C
TH287	NE295	R9b2	16304C 16362C	73G 152C 263G 315.1C
TH288	S309	R9b2	16124C 16304C 16362C	73G 263G 309.1C 309.2C 315.1C
TH289	N2	R9c	16304C	73G 249D 263G 315.1C
TH290	N202	R9c	16304C	73G 249D 263G 309.1C 315.1C
TH291	C261	R9c	16209C 16304C	73G 249D 263G 309.2C 315.1C
TH292	C277	R9c	16304C	73G 249D 263G 315.1C
TH293	C315	R9c	16304C	73G 249D 263G 309.1C 315.1C
TH294	N10	R9c1	16093C 16157C 16304C	73G 146C 151T 263G 309.1C 315.1C
TH295	N192	R9c1	16157C 16304C	73G 152C 228A 263G 315.1C
TH296	NE92	R9c1a	16157C 16256T 16304C 16335G	73G 249D 263G 315.1C
TH297	S172	R11	16182C 16183C 16189C 16311C	73G 189G 195A 263G 309.1C 315.1C
TH298	S45	R22	16249C 16288C 16317C	73G 195C 263G 315.1C 329A
TH299	C116	R22	16213A 16232T 16249C 16266T 16288C 16295T 16304C	73G 146C 152C 185A 189G 263G 309.1C 309.2C 315.1C 329A
TH300	S123	R22	16249C 16288C 16301T 16304C 16357C	73G 152C 263G 315.1C 329A
TH301	C267	R22	16249C 16288C 16304C	73G 263G 309.1C 315.1C 329A
TH302	S58	Y2	16126C 16231C 16311C	73G 143A 228A 263G 309.1C 315.1C
TH303	S257	F4b	16218T 16311C	73G 185A 249D 263G 309.1C 315.1C
TH304	C146	Z	16185T 16223T 16260T 16298C	73G 152C 249D 263G 309.1C 315.1C
TH305	S59	F3a1	16145A 16260T 16298C 16355T 16362C	73G 207A 249D 263G 309.1C 315.1C
TH306	N71	F3a1	16260T 16298C 16355T 16362C	73G 207A 249D 263G 309.1C 315.1C
TH307	C77	F3a	16111T 16192T 16249C 16263C 16298C 16355T 16362C	73G 207A 249D 263G 309.1C 309.2C 315.1C
TH308	NE98	F3a1	16260T 16298C 16355T 16362C	73G 207A 249D 263G 309.1C 315.1C
TH309	N185	F3a1	16260T 16298C 16355T 16362C	73G 152C 207A 249D 263G 309.1C 315.1C

*

N: Chiang Rai, Nan, Phayao, Chiang Mai, Mae Hong Son, Phrae, Lampang, Lamphun and Uttaradit

NE: Nong Khai, Nakhon Phanom, Sakon Nakhon, Udon Thani, Nong Bua Lamphu, Loei, Mukdahan, Kalasin, Khon Kaen, Amnat Charoen, Yasothorn, Roi Et, Maha Sarakham, Chaiyaphum, Nakhon Ratchasima, Buri Ram, Surin, Sisaket and Ubon Ratchathani

C: Phitsanulok, Sukhothai, Phetchabun, Phichit, Kamphaeng Phet, Nakhon Sawan, Lop Buri, Chai Nat, Uthai Thani, Sing Buri, Ang Thong, Saraburi, Phra Nakhon Si Ayutthaya, Suphan Buri, Nakhon Nayok, Pathum Thani, Nonthaburi, Nakhon Pathom, Samut Prakan, Samut Sakhon and Samut Songkhram

S: Chumphon, Ranong, Surat Thani, Nakhon Si Thammarat, Krabi, Phang Nga, Phuket, Phatthalung, Trang, Pattani, Songkhla, Satun, Narathiwat and Yala

Table S2 Haplogroup frequencies in Thailand and other Asian populations.

Haplogroup	Thailand (present study) (n=309)	Cambodia Zhang et al. (2013) (n=1054)	Indonesia Mona et al. (2009) (n=330)	Myanmar Summerer et al. (2014) (n=327)	Philippines Tabbada et al. (2010) (n=423)	Malaysia Maruyama et al. (2010) (n=124)	Singapore Shee et al. (2005) (n=100)	Vietnam Li et al. (2007) (n=73)	Japan Maruyama et al. (2013) (n=270)	Korea Lee et al. (2006) (n=593)	China Yao et al. (2002) (n=251)	Nepal Fornarino et al. (2009) (n=173)	India Fornarino et al. (2009) (n=101)
A	0.32	...	...	...	...	...	9	...	0.74	2.19	7.17	...	...
A4	1.62	...	...	4.59	...	...	...	...	...	3.04	...	...	...
A4d	0.32	...	...	0.61	...	...	...	...	...	...	...	...	...
A5b	0.32	...	...	...	...	...	...	...	...	...	...	...	...
B2g	0.32	...	...	...	...	...	...	...	...	...	...	...	...
B4	0.32	0.09	...	...	...	...	...	6.85	...	4.05	2.39	...	...
B4a	2.91	0.09	3.64	0.61	11.82	3.23	3	4.11	1.48	3.71	4.78	...	...
B4b	0.97	0.28	7.27	...	7.57	2.42	1	...	2.59	3.37	3.59	...	...
B4c	3.56	5.12	3.64	1.22	4.96	9.68	...	...	3.7	...	...	...	...
B4g	1.29	...	...	...	...	...	...	...	...	...	...	...	...
B5a	8.41	27.32	0.61	3.67	0.71	4.84	5	5.48	0.74	1.52	2.39	4.62	...
B5b	0.65	0.76	3.94	...	7.8	0.81	2	...	2.22	3.04	1.59	...	...
B6a	0.32	...	...	1.83	...	...	...	...	...	...	...	...	...
C4a	0.97	...	...	1.22	...	...	...	...	...	...	...	...	...
C4c	0.32	...	...	0.31	...	...	...	...	...	...	...	...	...
C7	0.65	...	...	...	...	...	...	...	...	...	...	...	...
C7a	2.59	...	...	...	...	...	...	...	...	...	...	...	...
D4	1.29	...	...	0.31	...	0.81	...	...	4.07	15.68	10.76	5.2	0.99
D4a	0.32	0.09	...	0.92	...	1.61	2	...	6.67	5.06	2.79	...	...
D4b	0.65	...	...	1.22	...	...	5	...	5.18	5.06	0.8	...	...
D4g	0.32	...	...	0.61	...	...	...	...	2.22	...	...	...	...
D4j	0.32	...	...	1.53	...	...	...	...	0.74	...	...	2.89	...
D5	0.32	0.09	...	...	...	0.81	...	...	...	0.51	2.79	...	...
D5b	0.65	...	...	...	0.47	...	...	...	2.59	2.7	...	...	...
D6c	0.32	...	...	...	...	...	...	...	...	...	...	...	...
F1a	13.92	17.84	14.24	21.71	7.57	14.52	8	24.66	2.22	2.19	5.98	...	...
F1b	0.32	...	...	...	...	...	...	1.37	2.96	2.7	3.19	...	...

[illegible]

Haplogroup	Thailand (present study) (n=309)	Cambodia Zhang et al. (2013) (n=1054)	Indonesia Mona et al. (2009) (n=330)	Myanmar Summerer et al. (2014) (n=327)	Philippines Tabbada et al. (2010) (n=423)	Malaysia Maruyama et al. (2010) (n=124)	Singapore Shee et al. (2005) (n=100)	Vietnam Li et al. (2007) (n=73)	Japan Maruyama et al. (2013) (n=270)	Korea Lee et al. (2006) (n=593)	China Yao et al. (2002) (n=251)	Nepal Fornarino et al. (2009) (n=173)	India Fornarino et al. (2009) (n=101)
M38	0.65	...	...	0.31	...	...	...	...	...	...	...	5.2	0.99
M50	0.32	...	...	0.31	...	...	...	...	...	...	...	...	...
M50a	0.32	...	...	...	...	...	...	...	...	...	...	...	...
M51a	0.32	0.66	...	...	...	...	...	...	...	...	...	...	...
M68a	0.97	1.23	...	...	...	...	...	...	...	...	...	...	...
M71	0.32	0.85	...	0.61	...	...	...	...	...	...	...	...	...
M71a	0.97	0.19	...	0.31	...	...	...	...	...	...	...	...	...
M71b	0.32	...	...	...	...	...	...	...	...	...	...	...	...
M72	0.32	0.38	...	0.61	...	...	...	...	...	...	...	...	...
M91a	0.32	...	...	...	...	...	...	...	...	...	...	...	...
N7a	0.32	...	...	...	...	...	...	...	...	...	...	...	...
N9a	2.59	1.04	...	0.31	...	1.61	3	...	2.96	7.25	4.78	...	...
N10a	1.62	0.09	...	...	...	...	...	...	...	...	...	...	...
N10b	0.32	...	...	...	...	...	...	...	...	...	...	...	...
N11a	0.32	...	...	...	...	...	...	...	...	...	...	...	...
N21	0.32	2.94	...	...	...	1.61	...	...	...	...	...	...	...
N22	0.65	...	...	...	0.24	0.81	...	...	...	...	...	...	...
R2	0.32	...	...	...	...	...	...	...	...	...	...	...	0.99
R5a	0.32	...	...	...	...	...	...	...	...	...	...	...	1.98
R9b	5.83	2.37	...	5.2	...	3.23	...	6.85	...	...	...	...	...
R9c	2.59	...	3.64	0.31	4.96	...	...	...	...	...	...	...	...
R11	0.32	...	...	0.31	...	...	...	...	...	0.34	...	...	...
R22	1.29	5.79	...	0.31	...	0.81
U7a	0.32
Y2	0.32	...	0.3	0.31	4.73	0.81	0.37
Z	0.32	0.31	2	...	0.37	0.84	1.99	2.31	...

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