

Supplemental Data

Supplemental Table S1. Phenotypic and genotypic drug resistance identified in sequenced *M. tuberculosis* strains*

ID	Strain Lineage	Phenotypic resistance detected	Genotypic resistance detected					
			Isoniazid	Rifampicin	Ethambutol	Pyrazinamide	Streptomycin	Quinolones
14-V054	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> H445L	<i>embB</i> M306V	ND	<i>rpsL</i> K88R	ND
14-V080	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> S164	<i>rpsL</i> K88R	ND
10-V021	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306V	<i>pncA</i> F58S	<i>rpsL</i> K43R	ND
10-V005	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> D435V	<i>embB</i> M306V	<i>pncA</i> E181	<i>rpsL</i> K43R	ND
14-V042	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> Q497R	<i>pncA</i> L151S	<i>rpsL</i> K43R	ND
10-V008	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> I491F	<i>embB</i> Q497R	<i>pncA</i> L19fs	<i>rpsL</i> K43R	ND
14-V051	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> F330S	<i>pncA</i> V131fs	<i>rpsL</i> K88R	ND
14-V036	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> H445R	<i>embB</i> M306I	<i>pncA</i> Q10P	<i>rpsL</i> K43R	ND
10-V012	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> Q497R	ND	<i>rpsL</i> K88R	ND
14-V081	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> Q497R	ND	<i>rpsL</i> K88R	ND
14-V060	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> A28T	<i>rpsL</i> K88R	ND
14-V083	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> A28T	<i>rpsL</i> K88R	ND

10-V014	Beijing	HSR	<i>fabG1</i> C-15T, <i>inhA</i> T17I	<i>rpoB</i> S450L	ND	ND	<i>rrs</i> A514C	ND
14-V061	Beijing	HSR	<i>fabG1</i> C-15T, <i>inhA</i> S94A	<i>rpoB</i> H445Y	<i>embB</i> G406S	ND	<i>rpsL</i> K43R	ND
10-V004	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V052	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V034	Beijing	HS	<i>fabG1</i> C-15T	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V064	Beijing	HS	<i>fabG1</i> C-15T	ND	ND	ND	<i>rpsL</i> K88R	ND
10-V027	Beijing	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> F94L	<i>rpsL</i> K88R	ND
10-V029	Beijing	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> F94L	<i>rpsL</i> K88R	ND
10-V023	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V032	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V070	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V075	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
09-V001	Beijing	HS	<i>katG</i> S315T	<i>rpoB</i> I491F	<i>embB</i> M306V	ND	<i>rpsL</i> K43R	ND
14-V062	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V073	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND

14-V076	Beijing	HS	<i>katG</i> S315T 36%	ND	ND	ND	<i>rpsL</i> K88R 34%	ND
14-V058	Beijing	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> S164	<i>rpsL</i> K43R	ND
14-V037	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V050	Beijing	SR	<i>fabG1</i> C-15T	<i>rpoB</i> S450L	<i>embB</i> D354A	ND	<i>rpsL</i> K43R	ND
14-V039	Beijing	S	<i>fabG1</i> C-15T	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V082	Beijing	S	<i>fabG1</i> C-15T	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V045	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V057	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V041	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V068	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V031	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> A205R	ND
14-V078	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K88R	<i>gyrA</i> A90V
14-V030	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V074	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
10-V019	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
14-V072	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
10-	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND

V011								
10-V020	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
09-V003	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
14-V033	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
14-V046	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A517C	ND
14-V066	Beijing	S	ND	ND	ND	ND	ND	ND
14-V084	Beijing	S	ND	ND	ND	ND	ND	ND
14-V067	Indo-Oceanic	HSRE	<i>fabG1</i> C-15T, <i>inhA</i> S94A	<i>rpoB</i> H445Y	<i>embB</i> G406S	ND	<i>rpsL</i> K43R	ND
10-V024	Indo-Oceanic	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> E405D	ND	<i>gidB</i> F12fs	ND
10-V018	Indo-Oceanic	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	ND	<i>pncA</i> Met1	<i>rpsL</i> K43R	ND
14-V035	Indo-Oceanic	HS	<i>fabG1</i> C-15T	ND	<i>embB</i> A439T	<i>pncA</i> V9A	<i>gidB</i> L79S, <i>gidB</i> A119T	ND
14-V038	Indo-Oceanic	HS	<i>fabG1</i> C-15T	ND	<i>embB</i> A439T	<i>pncA</i> V9A	<i>gidB</i> L79S, <i>gidB</i> A119T	ND
10-V010	Indo-Oceanic	HS	<i>katG</i> S315T	<i>rpoB</i> D435Y	ND	ND	<i>rpsL</i> K88R	ND
10-V025	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R, <i>gidB</i> A118fs	ND
10-V028	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R, <i>gidB</i> A118fs	ND
14-V063	Indo-Oceanic	HS	<i>furA</i> L68F	ND	ND	ND	ND	ND

10-V007	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	ND	ND	ND
14-V059	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> A134Y	<i>rpsL</i> K43R	ND
14-V044	Indo-Oceanic	H	<i>fabG1</i> C-15T	ND	ND	<i>pncA</i> -13 C>A	ND	ND
14-V056	Indo-Oceanic	H	<i>fabG1</i> C-15T	ND	ND	<i>pncA</i> -13 C>A	ND	ND
10-V026	Indo-Oceanic	H	<i>furA</i> L68F	ND	ND	ND	ND	ND
10-V006	Indo-Oceanic	S	ND	ND	ND	<i>pncA</i> E174K	<i>rrs</i> A514C	ND
14-V049	Indo-Oceanic	S	ND	ND	ND	<i>pncA</i> E174K	<i>rrs</i> A514C	ND
10-V002	Indo-Oceanic	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
10-V013	Indo-Oceanic	S	ND	ND	ND	ND	<i>gidB</i> W45	ND
10-V015	Indo-Oceanic	S	<i>katG</i> P131Q	ND	ND	ND	<i>rpsL</i> K43R	ND
10-V016	Indo-Oceanic	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
10-V017	Indo-Oceanic	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
14-V069	Indo-Oceanic	S	ND	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V079	Indo-Oceanic	S	ND	ND	ND	ND	<i>rpsL</i> K88R	<i>gyrA</i> A90V
14-V040	Euro-American	HS	<i>katG</i> S315T (42%)	ND	ND	ND	<i>rpsL</i> K88R	ND
14-V043	Euro-American	HS	<i>katG</i> S315T (36%)	ND	ND	ND	<i>rpsL</i> K88R	ND
14-	Euro-	HS	<i>katG</i> S315T	ND	ND	ND	ND	ND

V047	American							
14-V048	Euro-American	HS	<i>katG</i> S315T	ND	ND	ND	<i>gidB</i> R47P	ND
14-V077	Euro-American	H	<i>katG</i> S315T	ND	ND	ND	ND	ND
10-V022	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> fs	ND
14-V053	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> W45	ND
14-V055	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> Trp45	ND
14-V071	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> V66fs	ND
10-V009	Other	S	ND	ND	ND	ND	<i>rrs</i> 517C>T	ND
14-V065	Other	S	ND	ND	ND	ND	<i>gidB</i> L91R	ND
14-V194	Beijing	Susceptible	ND	ND	ND	ND	ND	<i>gyrA</i> D94G
09-V085	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
09-V088	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V189	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V131	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V145	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V146	Beijing	Susceptible	ND	ND	ND	ND	ND	ND

14-V178	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
10-V113	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V118	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V167	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V177	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V187	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
14-V134	Indo-Oceanic	Susceptible	ND	ND	ND	ND	<i>gidB</i> A118fs	ND
14-V128	Indo-Oceanic	Susceptible	ND	ND	ND	ND	ND	ND
14-V154	Indo-Oceanic	Susceptible	ND	ND	ND	ND	ND	ND
10-V109	Euro-American	Susceptible	ND	ND	ND	ND	ND	ND
14-V120	Euro-American	Susceptible	ND	ND	ND	ND	ND	ND

NA – not applicable; H – isoniazid; R – rifampicin; E – ethambutol; S – streptomycin; ND – no relevant mutation detected

*Sequenced *M. tuberculosis* strains included all strains with phenotypic resistance to any first-line drug (84) and those that clustered by MIRU-24 (an additional 18 drug susceptible strains)

Supplemental Table S2. Comparison of *M. tuberculosis* cluster characteristics among TB/HIV co-infected patients and community strains* from Ho Chi Minh City, Vietnam

Cluster* number	HIV	Holt** cluster	Terminal branch length	Lineage	Mutations detected					
					H	R	E	Z	S	Q
1	+	NA	5	Beijing	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> S164	<i>rpsL</i> K88R	ND
	-	103	2	Beijing	<i>katG</i> S315T	ND	ND	<i>pncA</i> S164	<i>rpsL</i> K43R	ND
	-	103	1	Beijing	<i>katG</i> S315T	ND	ND	<i>pncA</i> S164	<i>rpsL</i> K43R	ND
2	+	NA	0	Beijing	ND	ND	ND	ND	ND	ND
	-	NA	1	Beijing	ND	ND	ND	ND	ND	ND
3	+	NA	1	Beijing	ND	ND	ND	ND	ND	ND
	-	91	6	Beijing	ND	ND	ND	ND	ND	ND
4	+	NA	5	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	+	NA	6	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	1	1	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	1	4	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	1	0	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND

5	+	NA	1	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	NA	1	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
6	+	NA	1	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	71	8	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	71	8	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	71	7	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
7	+	NA	3	Beijing	ND	ND	ND	ND	AlaArg205	ND
	-	NA	3	Beijing	ND	ND	ND	ND	AlaArg205	ND
8	+	NA	5	Euro- American [#]	ND	ND	ND	ND	<i>rrs</i> 517C>T	ND
	-	177	7	Euro- American [#]	ND	ND	ND	ND	<i>rrs</i> 517C>T	ND
	-	177	6	Euro- American [#]	ND	ND	ND	ND	<i>rrs</i> 517C>T	ND
	-	177	7	Euro- American [#]	ND	ND	ND	ND	<i>rrs</i> 517C>T	ND
	-	177	2	Euro- American [#]	ND	ND	ND	ND	<i>rrs</i> C517T	ND
9	+	NA	4	Euro- American [#]	ND	ND	ND	ND	L91A	ND

	-	172	4	Euro-American [#]	ND	ND	ND	ND	ND	ND
	-	172	3	Euro-American [#]	ND	ND	ND	ND	ND	ND
	-	172	3	Euro-American [#]	ND	ND	ND	ND	ND	ND
	-	172	5	Euro-American [#]	ND	ND	ND	ND	ND	gyrA S91P
	-	172	6	Euro-American [#]	ND	ND	ND	ND	ND	ND
10	+	NA	0	Indo-Oceanic	ND	ND	ND	ND	<i>gidB</i> fs	ND
	-	NA	1	Indo-Oceanic	ND	ND	ND	ND	<i>gidB</i> fs	ND
11	+	NA	4	Indo-Oceanic	ND	ND	ND	ND	<i>gidB</i> W45	ND
	+	NA	1	Indo-Oceanic	ND	ND	ND	ND	<i>gidB</i> W45	ND
	-	210	5	Indo-Oceanic	ND	ND	ND	ND	<i>gidB</i> W45	ND
	-	210	7	Indo-Oceanic	ND	ND	ND	ND	<i>gidB</i> W45	ND
12	+	NA	1	Indo-Oceanic	<i>furA</i> L68F	ND	ND	ND	ND	ND
	-	NA	4	Indo-Oceanic	<i>furA</i> L68F	ND	ND	ND	ND	ND
13	-	NA	5	Beijing	ND	ND	ND	ND	ND	ND
	-	NA	1	Beijing	ND	ND	ND	ND	ND	ND
	+	NA	7	Beijing	ND	ND	ND	ND	<i>rpsL</i> K88R	gyrA A90V
	-	ND	4	Beijing	ND	ND	ND	ND	ND	ND

	-	ND	2	Beijing	ND	ND	ND	ND	ND	ND
	+	ND	11	Beijing	ND	ND	ND	ND	ND	ND
	-	154	1	Beijing	ND	ND	ND	ND	ND	ND
	-	154	3	Beijing	ND	ND	ND	ND	ND	ND
	-	154	3	Beijing	ND	ND	ND	ND	ND	ND
	-	154	9	Beijing	ND	ND	ND	ND	ND	ND
	-	154	6	Beijing	ND	ND	ND	ND	ND	ND
	-	154	4	Beijing	ND	ND	ND	ND	ND	ND
	-	154	3	Beijing	<i>katG</i> S315T	ND	ND	ND	ND	ND
	-	154	6	Beijing	<i>katG</i> S315T	ND	ND	ND	ND	ND
	-	154	9	Beijing	ND	ND	ND	ND	ND	ND
	-	154	0	Beijing	ND	ND	ND	ND	ND	ND
	-	154	0	Beijing	ND	ND	ND	ND	ND	ND
14	+	NA	2	Beijing	ND	ND	ND	ND	<i>rpsL</i> K88R	ND
	-	62	4	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	62	6	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
	+	NA	5	Beijing	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
15	+	NA	1	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND
	-	48	7	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND

	-	48	0	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND
	-	48	3	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND
	-	48	1	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	<i>gyrA</i> S91P, <i>gyrA</i> A90V
16	+	NA	3	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND
	-	48	3	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND
	-	48	3	Beijing	ND	ND	ND	ND	<i>rrs</i> A514C	ND
17	+	NA	4	Beijing	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306V	<i>pncA</i> F58S	<i>rpsL</i> K43R	ND
	-	54	5	Beijing	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306V	<i>pncA</i> F58S	<i>rpsL</i> K43R	ND
	-	54	2	Beijing	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306V	<i>pncA</i> F58S	<i>rpsL</i> K43R	ND
	-	54	8	Beijing	<i>katG</i> S315T	<i>rpoB</i> S450V	<i>embB</i> M306V	<i>pncA</i> F58S	<i>rpsL</i> K43R	ND
18	+	NA	4	Beijing	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND

	-	NA	3	Beijing	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
19	+	NA	5	Beijing	<i>fabG1</i> C-15T, <i>inhA</i> T17I	<i>rpoB</i> S450L	ND	ND	<i>rrs</i> A514C	ND
	-	139	3	Beijing	<i>fabG1</i> C-15T	ND	ND	ND	<i>rrs</i> A514C	ND
	-	139	7	Beijing	<i>fabG1</i> C-15T	ND	ND	ND	<i>rrs</i> A514C	ND
	-	139	9	Beijing	<i>fabG1</i> C-15T	ND	ND	ND	<i>rrs</i> A514C	ND
20	+	NA	5	Indo-Oceanic	<i>fabG1</i> C-15T, <i>inhA</i> S94A	<i>rpoB</i> H445Y	<i>embB</i> G406D	ND	<i>rpsL</i> K43R	ND
	-	NA	3	Indo-Oceanic	<i>fabG1</i> C-15T	ND	ND	ND	<i>rpsL</i> K43R	ND
21	+	NA	5	Beijing	ND	ND	ND	ND	<i>rpsL</i> K88R	ND
	-	NA	4	Beijing	ND	ND	ND	ND	<i>rpsL</i> K88R	ND
Possible cluster 1	+	NA	7	Beijing	ND	ND	ND	ND	ND	ND
	-	NA	7	NA	ND	ND	ND	ND	ND	ND
	-	NA	12	NA	ND	ND	ND	ND	ND	ND
Possible cluster 2	+	NA	8	Euro-American	<i>katG</i> S315T	ND	ND	ND	ND	ND
	-	NA	5	NA	<i>katG</i> S315T	ND	ND	ND	ND	ND

	+	NA	10	Euro-American	<i>katG</i> S315T	ND	ND	ND	ND	ND
Possible cluster 3	+	NA	11	Beijing	<i>katG</i> S315T	<i>rpoB</i> D435V	<i>embB</i> M306V	<i>pncA</i> E181	<i>rpsL</i> K43R	ND
	-	NA	7	NA	<i>katG</i> S315T	<i>rpoB</i> - 6T>C	ND	ND	<i>rpsL</i> K43R	ND
	+	NA	4	Beijing	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> Q497R	<i>pncA</i> L151S	<i>rpsL</i> K43R	ND
Possible cluster 4	+	NA	11	Beijing	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	121	6	NA	<i>katG</i> S315T	<i>rpoB</i> S450L	ND	ND	<i>rpsL</i> K88R	ND
Possible cluster 5	+	NA	NA	Beijing	ND	ND	ND	ND	ND	ND
	-	121	11	NA	<i>katG</i> S315T	<i>rpoB</i> L430P	<i>embB</i> G406D	ND	<i>rpsL</i> K88R	ND
Possible cluster 6	+	NA	11	Beijing	<i>katG</i> S315T	ND	ND	<i>pncA</i> S164	<i>rpsL</i> K43R	ND
	-	103	5	NA	<i>katG</i> S315T	ND	<i>embB</i> M306V	ND	<i>rpsL</i> K43R	ND
	-	103	6	NA	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	103	1	NA	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	103	0	NA	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
	-	103	5	NA	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND

Possible cluster 7	+	NA	18	Indo-Oceanic	<i>katG</i> S315T	<i>rpoB</i> S450L	ND	<i>pncA</i> Met1	<i>rpsL</i> K43R	ND
	-	NA	5	NA	ND	ND	ND	ND	ND	ND
	-	NA	NA	NA	ND	ND	ND	ND	ND	ND
	-	NA	NA	NA	ND	ND	ND	ND	ND	ND
	-	NA	NA	NA	ND	ND	ND	ND	ND	ND
Possible cluster 8	+	NA	8	Beijing	<i>katG</i> S315T	<i>rpoB</i> H445R	<i>embB</i> M306I	<i>pncA</i> Q10P	<i>rpsL</i> K43R	ND
	-	NA	10	NA	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
Possible cluster 9	+	NA	10	Beijing	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND
	-	73	15	NA	<i>fabG1</i> C-15T	<i>rpoB</i> S450L	ND	ND	<i>rpsL</i> K88R	ND
	-	73	8	NA	<i>katG</i> S315T	<i>rpoB</i> S450W	ND	ND	<i>rpsL</i> K88R	ND
	-	73	12	NA	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND
	-	NA	NA	NA	ND	ND	ND	ND	ND	ND

TB – tuberculosis; HIV – human immunodeficiency virus; NA – not available in Holt et.al (1) data; ND – no relevant mutation detected; - negative; + positive; INH – isoniazid; RMP – rifampicin; *EMB* – ethambutol; STR – streptomycin; FQ – Quinolones;

* WGS cluster identified as ≤ 10 SNPs difference, “possible cluster” as 10-20 SNPs difference

** Cluster and sequence data for community *M. tuberculosis* strains were derived from Holt et.al (2).

Euro-American lineage – sub-lineage MANU

(2) Holt KE, McAdam P, Phan VKT, Dang TMH, Nguyen NL, Nguyen HL, et al. Genomic analysis of *Mycobacterium tuberculosis* reveals complex etiology of tuberculosis in Vietnam including frequent introduction and transmission of Beijing lineage and positive selection for EsxW Beijing variant. bioRxiv. 2016.

Supplemental Table S3. Information of all sequenced isolates

No	ID	Cluster	No of SNP differences	Year of isolation	Lineage	Phenotypic resistance detected	Genotypic resistance detected					
							H	R	E	Z	S	Q
1	10-V027	1.WGS	0	2010	Beijing	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> F94L	<i>rpsL</i> K43R	ND
2	10-V029		0	2010	Beijing	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> F94L	<i>rpsL</i> K43R	ND
3	10-V109	2.WGS	1	2010	Euro-American	Susceptible	ND	ND	ND	ND	ND	ND
4	14-V120		3	2014	Euro-American	Susceptible	ND	ND	ND	ND	ND	ND
5	14-V064	3.WGS	5	2014	Beijing	HS	<i>fabG1</i> - 15C>T	ND	ND	ND	<i>rpsL</i> K43R	ND
6	14-V082		3	2014	Beijing	S	<i>fabG1</i> - 15C>T	ND	ND	ND	<i>rpsL</i> K43R	ND
7	14-V053	4.WGS	4	2014	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> Trp45	ND
8	14-V055		1	2014	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> W45	ND
9	10-V010	5.WGS	1	2010	Indo-Oceanic	HS	<i>katG</i> S315T	<i>rpoB</i> D435Y	ND	ND	<i>rpsL</i> K88R	ND
10	10-V025		1	2010	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	ND	<i>gidB</i> L88T, <i>gidB</i> R118fs	ND
11	10-V028		1	2010	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	ND	<i>gidB</i> L88T, <i>gidB</i> R118fs	ND
12	10-V012	6.WGS	0	2010	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> Q497R	ND	<i>rpsL</i> K88R	ND
13	14-		2	2014	Beijing	HSR	<i>katG</i>	<i>rpoB</i>	<i>embB</i>	ND	<i>rpsL</i> K88R	ND

	V081						S315T	S450L	Q497R			
14	14-V030	7.WGS	2	2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
15	14-V074		5	2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
16	14-V060	8.WGS	1	2014	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> A28T	<i>rpsL</i> K88R	ND
17	14-V083		0	2014	Beijing	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> A28T	<i>rpsL</i> K88R	ND
18	14-V034	9.WGS	3	2014	Beijing	HS	<i>fabG1</i> - 15C>T	ND	ND	ND	<i>rpsL</i> K43R	ND
19	14-V039		4	2014	Beijing	S	<i>fabG1</i> - 15C>T	ND	ND	ND	<i>rpsL</i> K43R	ND
20	14-V035	10.WGS	3	2014	Indo-Oceanic	HS	<i>fabG1</i> C-15T	ND	<i>embB</i> A439T	<i>pncA</i> V9A	<i>gidB</i> L79S, <i>gidB</i> A119T	ND
21	14-V038		4	2014	Indo-Oceanic	HS	<i>fabG1</i> - 15C>T	ND	<i>embB</i> A439T	<i>pncA</i> V9A	<i>gidB</i> L79S, <i>gidB</i> A119T	ND
22	10-V006	11.WGS	1	2010	Indo-Oceanic	S	ND	ND	ND	<i>pncA</i> E174K	<i>rrs</i> A514C	ND
23	14-V049		2	2014	Indo-Oceanic	S	ND	ND	ND	<i>pncA</i> E174K	<i>rrs</i> A514C	ND
24	14-V044	12.WGS	2	2014	Indo-Oceanic	H	<i>fabG1</i> - 15C>T	ND	ND	<i>pncA</i> - 13 C>A	ND	ND
25	14-V056		3	2014	Indo-Oceanic	H	<i>fabG1</i> - 15C>T	ND	ND	<i>pncA</i> - 13 C>A	ND	ND
26	14-V040	13.WGS	0	2014	Indo-Oceanic	HS	<i>katG</i> S315T (42%)	ND	ND	ND	<i>rpsL</i> K88R	ND
27	14-V043		0	2014	Euro-American	HS	<i>katG</i> S315T (36%)	ND	ND	ND	<i>rpsL</i> K88R	ND

28	10-V004			2010	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND		
29	14-V052			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND		<i>rpsL</i> K88R	ND	
30	14-V054			2014	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> H445L	<i>embB</i> M306V	ND			<i>rpsL</i> K88R	ND
31	14-V080			2014	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306I	<i>pncA</i> S164				<i>rpsL</i> K88R
32	09-V085			2009	Beijing	Susceptible	ND	ND	ND	ND	ND	ND		
33	09-V088			2009	Beijing	Susceptible	ND	ND	ND	ND	ND	ND		
34	14-V045			2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND		
35	14-V057			2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND		
36	14-V041			2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND		
37	14-V068			2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND		
38	14-V031			2014	Beijing	S	ND	ND	ND	ND	<i>gidB</i> A205R	ND		
39	10-V009			2010	Other	S	ND	ND	ND	ND	<i>rrs</i> C517T	ND		
40	14-V065			2014	Other	S	ND	ND	ND	ND	<i>gidB</i> L91R	ND		
41	10-V022			2010	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> fs	ND		
42	14-V063			2014	Indo-Oceanic	HS	<i>furA</i> L68F	ND	ND	ND	ND	ND		
43	10-V019			2010	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND		

44	14-V072			2014	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
45	10-V021			2010	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> M306V	<i>pncA</i> F58S	<i>rpsL</i> K43R	ND
46	10-V023			2010	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
47	14-V078			2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K88R	<i>gyrA</i> A90V
48	14-V189			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
49	10-V014			2010	Beijing	HSR	<i>fabG1</i> - 15C>T, <i>inhA</i> T17I	<i>rpoB</i> S450L	ND	ND	<i>rrs</i> A514C	ND
50	14-V131			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
51	10-V007			2010	Euro-American	HS	<i>katG</i> S315T	ND	ND	ND	ND	ND
52	14-V077			2014	Euro-American	H	<i>katG</i> S315T	ND	ND	ND	ND	ND
53	10-V005			2010	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> D435V	<i>embB</i> M306V	<i>pncA</i> E181	<i>rpsL</i> K43R	ND
54	14-V042			2014	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> Q497R	<i>pncA</i> L151S	<i>rpsL</i> K43R	ND
55	14-V032			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND
56	14-V145			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
57	14-V146			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
58	10-V011			2010	Beijing	S	ND	ND	ND	ND	ND	ND
59	10-V020			2010	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND

60	10-V026			2010	Indo-Oceanic	H	<i>furA</i> L68F	ND	ND	ND	ND	ND
61	14-V047			2014	Euro-American	HS	<i>katG</i> S315T	ND	ND	ND	ND	ND
62	14-V059			2014	Indo-Oceanic	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> A134Y	<i>rpsL</i> K43R	ND
63	14-V061			2014	Beijing	HSR	<i>fabG1</i> -15C>T, <i>inhA</i> S94A	<i>rpoB</i> H445Y	<i>embB</i> G406S	ND	<i>rpsL</i> K43R	ND
64	14-V067			2014	Indo-Oceanic	HSRE	<i>fabG1</i> -15C>T, <i>inhA</i> S94A	<i>rpoB</i> H445Y	<i>embB</i> G406S	ND	<i>rpsL</i> K43R	ND
65	14-V070			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
66	14-V075			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
67	14-V178			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
68	09-V001			2009	Beijing	HS	<i>katG</i> S315T	<i>rpoB</i> I491F	<i>embB</i> M306V	ND	<i>rpsL</i> K43R	ND
69	10-V002			2010	Indo-Oceanic	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
70	09-V003			2009	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
71	10-V008			2010	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> I491F	<i>embB</i> Q497R	<i>pncA</i> L19fs	<i>rpsL</i> K43R	ND
72	10-V013			2010	Indo-Oceanic	S	ND	ND	ND	ND	<i>gidB</i> W45	ND
73	10-V015			2010	Indo-Oceanic	S	<i>katG</i> P131Q	ND	ND	ND	<i>rpsL</i> K43R	ND
74	10-			2010	Indo-	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND

	V016				Oceanic							
75	10-V017			2010	Indo-Oceanic	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
76	10-V024			2010	Indo-Oceanic	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> E405D	ND	<i>gidB</i> F12fs	ND
77	14-V033			2014	Beijing	S	ND	ND	ND	ND	<i>rpsL</i> K43R	ND
78	14-V046			2014	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A514C	ND
79	14-V048			2014	Euro-American	HS	<i>katG</i> S315T	ND	ND	ND	<i>gidB</i> R47P	ND
80	14-V050			2014	Beijing	SR	<i>fabG1</i> -15C>T	<i>rpoB</i> S450L	<i>embB</i> D354A	ND	<i>rpsL</i> K43R	ND
81	14-V051			2014	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> S450L	<i>embB</i> F330S	<i>pncA</i> V131fs	<i>rpsL</i> K88R	ND
82	14-V062			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
83	14-V066			2014	Beijing	S	ND	ND	ND	ND	<i>rrs</i> A517C	ND
84	14-V069			2014	Indo-Oceanic	S	ND	ND	ND	ND	<i>rpsL</i> K88R	ND
85	14-V071			2014	Euro-American	S	ND	ND	ND	ND	<i>gidB</i> V66fs	ND
86	14-V073			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K43R	ND
87	14-V076			2014	Beijing	HS	<i>katG</i> S315T (36%)	ND	ND	ND	<i>rpsL</i> K88R (34%)	ND
88	14-V079			2014	Indo-Oceanic	S	ND	ND	ND	ND	<i>rpsL</i> K88R	<i>gyrA</i> A90V
89	14-V084			2014	Beijing	S	ND	ND	ND	ND	ND	ND

90	10-V113			2010	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
91	14-V118			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
92	14-V128			2014	Indo-Oceanic	Susceptible	ND	ND	ND	ND	ND	ND
93	14-V134			2014	Indo-Oceanic	Susceptible	ND	ND	ND	ND	<i>gidB</i> R118fs	ND
94	14-V154			2014	Indo-Oceanic	Susceptible	ND	ND	ND	ND	ND	ND
95	14-V167			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
96	14-V177			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
97	14-V187			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	ND
98	14-V194			2014	Beijing	Susceptible	ND	ND	ND	ND	ND	<i>gyrA</i> D94G
99	14-V058			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	<i>pncA</i> S164	<i>rpsL</i> K43R	ND
100	10-V018			2010	Indo-Oceanic	HSR	<i>katG</i> S315T	<i>rpoB</i> S450L	ND	<i>pncA</i> Met1	<i>rpsL</i> K43R; <i>rrs</i> 1401A>G	ND
101	14-V036			2014	Beijing	HSRE	<i>katG</i> S315T	<i>rpoB</i> H445R	<i>embB</i> M306I	<i>pncA</i> Q10P	<i>rpsL</i> K43R	ND
102	14-V037			2014	Beijing	HS	<i>katG</i> S315T	ND	ND	ND	<i>rpsL</i> K88R	ND

ND – no relevant mutation detected; H – isoniazid; R – rifampicin; E – ethambutol; S – streptomycin; F – Quinolones;

Supplemental Figure S1. Comparison of *M. tuberculosis* branch length in HIV-infected patients by age group

