

TABLE S1 MIRU-VNTR typing of *Mycobacterium bovis* SB0121 isolates (n = 115) from the random panel using nine loci and three combinations of loci.

ID ^a	MIRU-VNTR loci ^b									MV type (9 loci) ^c	MV type (6 loci) ^d	MV type (4 loci) ^e	Animal origin
	ETR-A	ETR-B	ETR-D	ETR-E	MIRU26	QUB11a	QUB11b	QUB26	QUB3232short				
	2165	2461	580	3192	2996	2163a	2163b	4052	3232				
<i>M. bovis</i> BCG ^f	5	5	2 ^g	3	5	10	3	5	5	-	-	-	-
MI05/00611 ^h	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI06/00833	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI07/00008 ⁷	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI08/03982 ⁷	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI07/10158 ³	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI07/10206 ³	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI07/10142	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI07/10213	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI07/14002	6	4	3	3	5	10	2	5	7	1A	1A	1	cattle
MI06/01507 ⁶	6	4	3	3	2	10	2	5	7	1B	1B	1	cattle
MI08/00019 ⁶	6	4	3	3	2	10	2	5	7	1B	1B	1	cattle
MI07/16345 ¹	6	4	3	3	5	10	2	3	7	1C	1C	1	cattle
MI08/00936 ¹	6	4	3	3	5	10	2	3	7	1C	1C	1	cattle
MI08/06952-1	6	4	3	3	5	10	2	N ⁱ	7	-	-	1	goat
MI07/03539	6	4	3	3	2	10	1	2	7	1D	1D	1	cattle
02/0439 ¹⁰	6	4	3	3	2	10	2	2	7	1E	1D	1	wild boar
98/0619 ⁹	5	4	3	3	5	10	2	5	8	2A	2A	2	cattle
98/0620 ⁹	5	4	3	3	5	10	2	5	8	2A	2A	2	cattle
99/0144	5	4	3	3	5	10	2	5	8	2A	2A	2	cattle
MI06/02508	5	4	3	3	5	10	2	5	8	2A	2A	2	cattle
MI07/01089	5	4	3	3	5	10	2	5	8	2A	2A	2	cattle
MI07/11268	5	4	3	3	4	10	2	5	8	2B	2B	2	cattle
MI07/00704	5	4	3	3	5	10	2	4	8	2C	2C	2	cattle
MI06/00001 ^h	5	4	3	3	6	10	2	5	8	2D	2D	2	cattle
03/0549	4	4	3	3	5	10	2	5	8	3	3	3	cattle
MI07/08592	4	4	3	3	5	10	2	5	8	3	3	3	cattle
MI07/11655	4	4	3	3	5	10	2	5	8	3	3	3	cattle
MI08/06714	4	4	3	3	5	10	2	5	8	3	3	3	cattle
MI08/06728	4	4	3	3	5	10	2	5	8	3	3	3	cattle

MI08/11685	4	4	3	3	5	10	2	5	8	3	3	3	wild boar
MI05/04376	6	4	3	3	5	10	2	5	8	4A	4A	4	cattle
MI06/00214 ¹⁴	6	4	3	3	5	10	2	5	8	4A	4A	4	cattle
MI06/07842	6	4	3	3	5	10	2	5	8	4A	4A	4	cattle
MI07/01798-2	6	4	3	3	4	10	2	3	8	4B	4B	4	goat
MI07/04849	6	4	3	3	4	10	2	3	8	4B	4B	4	cattle
MI05/02585	6	4	3	3	5	10	2	3	8	4C	4C	4	cattle
04/1602	5	2	3	3	5	7	2	5	6	5A	5	5	cattle
MI06/05500	5	2	3	3	5	7	2	5	6	5A	5	5	cattle
MI07/04842	5	2	3	3	5	7	2	5	6	5A	5	5	cattle
MI07/08681	5	2	3	3	5	7	2	5	6	5A	5	5	cattle
MI07/11265	5	2	2	3	5	7	2	5	6	5B	5	5	cattle
MI05/00804	5	4	3	3	5	10	2	5	7	6A	6A	6	cattle
04/1048	5	4	3	3	5	10	2	5	7	6A	6A	6	cattle
MI07/12798	5	4	3	3	5	10	2	5	7	6A	6A	6	cattle
MI06/05151	5	4	3	3	6	10	2	5	7	6B	6B	6	wild boar
DICM08/00669-3	5	4	3	3	6	10	2	5	7	6B	6B	6	wild boar
MI05/02380	6	5	3	3	5	10	2	5	10	7A	7A	7	cattle
MI06/05819	6	5	3	3	5	10	2	5	10	7A	7A	7	cattle
MI07/10177 ⁴	6	5	3	3	5	10	2	5	10	7A	7A	7	cattle
MI07/16293 ⁴	6	5	3	3	5	10	2	5	10	7A	7A	7	cattle
98/0502	6	5	3	3	5	10	2	3	10	7B	7B	7	cattle
03/0098	4	2	2	3	5	10	2	5	6	8A	8	8	cattle
MI06/00238	4	2	2	3	5	10	2	5	6	8A	8	8	cattle
04/0265	4	2	3	3	5	10	2	5	6	8B	8	8	cattle
MI08/12888	5	3	3	3	5	10	2	5	7	9	9	9	red deer
MI08/04144	5	3	3	3	5	10	2	5	7	9	9	9	fallow deer
MI05/00319 ²	5	3	3	3	5	9	2	5	6	10	10	10	cattle
MI05/00323 ²	5	3	3	3	5	9	2	5	6	10	10	10	cattle
MI07/16333 ¹³	5	4	3	3	5	10	2	5	10	11	11	11	cattle
MI07/01170	5	4	4	N	5	10	2	5	10	-	11	11	cattle
97/0024	5	4	3	3	5	7	2	5	7	12	12	12	cattle
MI08/06282	5	4	3	3	5	7	2	5	7	12	12	12	cattle
MI07/06633 ⁸	6	3	3	3	5	10	2	4	7	13	13	13	cattle

MI07/11354 ⁸	6	3	3	3	5	10	2	4	7	13	13	13	cattle
MI06/00216 ¹⁴	6	4	3	3	5	10	2	5	6	14	14	14	cattle
MI07/08629	6	4	3	3	5	10	2	5	6	14	14	14	cattle
MI10/07686	5	4	4	3	5	10	2	5	9	15A	15A	15	pig
DICM08/01277-10B	5	4	4	3	5	10	2	7	9	15B	15B	15	red deer
99/0281	5	4	3	3	5	5	2	6	5	16A	16A	16	cattle
MI06/07005	5	4	3	3	4	5	2	5	5	16B	16B	16	cattle
00/00178T	6	4	3	3	2	10	2	5	10	17A	17A	17	cattle
MI05/00841	6	4	3	3	5	10	2	5	10	17B	17B	17	cattle
MI07/06666	6	4	3	3	2	10	2	5	9	18A	18A	18	cattle
MI09/04329	6	4	3	3	5	10	2	5	9	18B	18B	18	wild boar
MI06/05481 ¹¹	3	3	3	3	5	10	2	5	9	19	19	19	cattle
MI06/05469 ¹¹	3	3	3	3	5	10	2	5	9	19	19	19	cattle
00/0197	1	3	3	3	5	10	2	5	8	20	20	20	cattle
MI06/05041	3	2	3	3	5	7	2	5	6	21	21	21	cattle
MI07/12732	4	3	2	3	5	15	2	5	7	22	22	22	cattle
MI07/11662	4	4	3	3	5	10	2	5	9	23	23	23	cattle
02/0440 ¹⁰	5	3	3	3	5	10	2	5	10	24	24	24	wild boar
98/0144	5	3	3	3	5	10	2	5	6	25	25	25	cattle
MI07/08732	5	3	3	3	5	10	2	5	8	26	26	26	cattle
MI05/01528	5	3	3	3	5	9	2	5	7	27	27	27	cattle
98/0679 ¹⁵	5	5	3	2	5	10	2	5	8	28	28	28	cattle
MI06/00126	5	4	3	3	5	10	2	5	15	29	29	29	cattle
99/0095 ⁵	5	4	3	3	5	10	2	5	4	30	30	30	cattle
MI10/06535	5	4	3	3	5	10	3	6	6	31	31	31	pig
MI06/06077	5	4	3	3	5	7	2	5	8	32	32	32	cattle
MI05/04423 ¹²	5	4	3	3	5	9	1	5	11	33	33	33	cattle
MI10/08243	5	4	3	3	5	9	2	5	8	34	34	34	fallow deer
MI08/00955 ¹³	5	4	3	3	6	12	2	4	6	35	35	35	cattle
MI05/04048	5	4	4	3	5	10	2	5	5	36	36	36	cattle
MI06/02387	5	5	3	3	5	10	2	5	6	37	37	37	cattle
MI08/06294	5	6	3	3	5	10	2	5	11	38	38	38	cattle
99/0254	6	3	3	3	5	9	2	5	5	39	39	39	cattle
MI06/06841	6	4	2	2	5	10	2	4	5	40	40	40	cattle

MI07/03947	6	5	3	2	4	10	2	5	8	41	41	41	cattle
MI05/00703	6	4	3	3	5	10	2	5	11	42	42	42	cattle
MI07/08688	6	4	3	3	6	11	2	4	14	43	43	43	cattle
MI05/00050 ^h	6	4	3	3	6	12	2	4	12	44	44	44	wild boar
MI08/00951	6	4	3	3	6	12	2	4	13	45	45	45	cattle
98/0686 ¹⁵	6	4	3	3	6	13	2	4	14	46	46	46	cattle
MI06/07218	6	5	3	2	5	10	2	5	9	47	47	47	cattle
MI06/07031	8	5	3	3	5	10	2	5	7	48	48	48	cattle
MI07/00701	5	3	4	3	5	7	N	5	11	-	49	49	cattle
MI07/11175	6	4	3	N	5	8	2	4	8	-	50	50	cattle
MI08/02787	7	4	2	N	5	6	1	5	11	-	51	51	cattle
MI08/11986	6	4	3	3	4/5	4	N	2/5	7	-	-	52	badger
99/0098 ⁵	5	4	3	3	5	N	2	5	4	-	-	-	cattle
MI05/04378 ¹²	12	5	3	3	4	N	2	4	8	-	-	-	cattle
MI07/03936	4/5	3	3	N	5	10	2	5	8	-	-	-	cattle
MI07/04598	5	3/4	3	N	N	N	2	4/5	7	-	-	-	cattle
MI07/11661	5	4	3	3	5	N	2	5	5	-	-	-	cattle
MI10/05128	N	4	3	3	N	N	2	N	8	-	-	-	badger

^a Isolate reference.

^b MIRU-VNTR loci with corresponding alias.

^c MIRU-VNTR types obtained with the nine-loci approach including ETR-A, ETR-B, ETR-D, ETR-E, MIRU26, QUB11a, QUB11b, QUB26 and QUB3232.

^d MIRU-VNTR types obtained with the six-loci approach including ETR-A, ETR-B, MIRU26, QUB11a, QUB26 and QUB3232.

^e MIRU-VNTR types obtained with the four-loci approach including ETR-A, ETR-B, QUB11a and QUB3232. Table is arranged according to the number of isolates with each type in descending order.

^f *Mycobacterium bovis* BCG Danish (CCUG 27863, Culture Collection, University of Göteborg, Sweden) included as positive control in all MIRU-VNTR assays.

^g *M. bovis* BCG and approximately 1% of *M. tuberculosis* strains lack the partial repeat of 53 bp at MIRU-VNTR locus ETR-D; in these cases the number of repeats is expressed as prime (').

^h Strains used for DNA microarray analysis.

ⁱ Not amplifiable.

¹⁻¹⁵ Pairs of related isolates from the same farm or hunting estate.

TABLE S2 Deletions common to the three *Mycobacterium bovis* strains MI05/00611, MI06/00001 and MI05/00050 identified by DNA microarray using composite microarrays representing all the genes in the reference genomes *M. bovis* AF2122/97, *M. tuberculosis* H37Rv and CDC1551.

Reference genome	Common gene name	Synonym	Function ^a
<i>M. tuberculosis</i> CDC1551	MT1560	MT1560	Hypothetical protein (2).
<i>M. tuberculosis</i> H37Rv	Rv0796	Rv0796;Rv0796 (9B6)	Required for the transposition of the insertion element IS6110. Found to be deleted (partially or completely) in one or more clinical isolates of <i>M. tuberculosis</i> H37Rv (9).
<i>M. tuberculosis</i> H37Rv	Rv1369c	Rv1369c;Rv1369c (5J1)	Possibly required for the transposition of the insertion element IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (6,8).
<i>M. tuberculosis</i> H37Rv	Rv1756c	Rv1756c;MT1803;Rv1756c (9J5)	Required for the transposition of the insertion element IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (6,8,9).
<i>M. tuberculosis</i> H37Rv	Rv1764	Rv1764;Rv1764 (9O5)	Required for the transposition of the insertion element IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (6,8,9).
<i>M. tuberculosis</i> H37Rv	Rv2167c	Rv2167c;Rv2167c (9C16)	Possibly required for the transposition of the insertion element IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (6,8).
<i>M. tuberculosis</i> H37Rv	Rv3185	Rv3185;Rv3185 (10J10)	Involved in the transposition in the insertion sequence IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (1,6,8,9).
<i>M. tuberculosis</i> H37Rv	Rv3187	Rv3187;Rv3187 (10L10)	Involved in the transposition in the insertion sequence IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (1,6,8,9).
<i>M. tuberculosis</i> H37Rv	PPE54	Rv3343c;Mb3375c;MT3447;PPE54;PPE;PPE (9B20)	Function unknown. Member of the <i>M. tuberculosis</i> PPE family (3,4,7).
<i>M. tuberculosis</i> H37Rv	Rv3380c	Rv3380c;Rv3380c (9C22)	Possibly required for the transposition of the insertion element IS6110. Identical to many other <i>M. tuberculosis</i> IS6110 transposase subunits (6,8).

^a For reference genome *M. tuberculosis* H37Rv according to Tuberculist <http://tuberculist.epfl.ch/index.html> (5).

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