

Genetically Marked Strains Of Bacteria

Hfr and F+ Strains

Escherichia coli K-12

HfrH :	<i>Hfr, thi-1 (HfrH:O-thr-leu...)</i>	IMG-11	KS749 :	<i>Hfr, thi, ilv, trp, proC, tsx, purE, xyl...)</i> KSM	IMG-1112
JA70 :	<i>Hfr, thi-1, relA, hsd (HfrH:O-thr-leu...)</i> MKD	IMG-1111	JC5029 :	<i>Hfr, thi-1, thr-300, ilv-318, cysA...)</i>	IMG-1133
MI262 :	<i>Hfr, thi-1, leuB6, ilv-619, ilvG605, spoT1 (Hfr:O-thr-leu...)</i> CGSC	IMG-1126	KA197 :	<i>Hfr, thi-1, pheA97, relA1, spoT1 (HfrKL16:O-lysA-cysA...)</i> CGSC	IMG-1127
JA73IbR :	<i>HfrH, thi-1, thrB1000, recA1, Collb-r (HfrH:O-thr-leu...)</i>	IMG-1171	AT982 :	<i>Hfr, dapD4, thi-1, relA1, spoT1 (HfrKL16:O-lysA-cysA...)</i> CGSC	IMG-1136
KS302 :	<i>Hfr, thi, ((gal-bio) (HfrH:O-thr-leu...))</i> KUSM	IMG-171	AT997 :	<i>Hfr, thi-1, relA1, dapC15, spoT1 (HfrKL16:O-lysA-cysA...)</i> CGSC	IMG-1128
Hfr300 :	<i>Hfr, thi-1, panB6, relA1, spoT1, (HfrH:O-thr-leu...)</i> CGSC	IMG-1174	MKD9101 :	<i>Hfr, thi-1, ptsF, rel-1, thyA3 (HfrKL16:O-lysA-cysA...)</i> MKD	IMG-1113
CA165 :	<i>Hfr, thi-1, relA1, lacI22, lacZ13 (HfrH:O-thr-leu...)</i>	IMG-1140	JC5088 :	<i>Hfr, thr-300, ilv-318, spc-300, recA56 (HfrKL16:O-lysA-cysA...)</i>	IMG-194
MKD9110 :	<i>Hfr, thi-1, ((gal-bio), (HfrH:O-thr-leu...))</i> MKD	IMG-1139	KL983 :	<i>Hfr, xyl-7, lacY1 (HfrKL983:O-dsdA-his...)</i> CGSC	IMG-142
Hfr6(=3807):	<i>Hfr, metB, mal-20, mtl-8, tsX-purE...)</i> CGSC	IMG-151	B7 :	<i>Hfr, metB1, (-r (HfrKL208:O-rac-trp...))</i>	IMG-126
KL99 :	<i>Hfr, thi-1, relA1, lacZ42, spoT1 (HfrKL99:O-pyrC-trpA...)</i> CGSC	IMG-1130	HfrC6 :	<i>Hfr, met, endA (HfrKL226:O-purE-metB...)</i>	IMG-1102
AB312 :	<i>Hfr, thr, leu, thiA, strA (HfrKL14:O-argG-malA...)</i> IBPhM	IMG-110	AT2243 :	<i>Hfr, pyrE41, metB1, tonA22, relA1 (HfrKL226:O-purE-metB...)</i> CGSC	IMG-152
ED1009 :	<i>Hfr, thi, pro, spc-r (HfrKL14:O-argG-malA...)</i> UNED	IMG-145	AT2243-11 :	<i>Hfr, metB1, pyrE41, relA1, O-purE-metB...)</i> CGSC	IMG-1124
G6MD2 :	<i>Hfr, hisA323, del(bio-asd)29 (HfrKL14:O-argG-malA...)</i> CGSC	IMG-1132	S26 :	<i>Hfr, phoA4, relA1, tonA22, T2-r,</i> CGSC	IMG-1141
ED1002 :	<i>Hfr, thi, pro, spc-r (HfrG11:O-malA-metB...)</i> UNED	IMG-144	CD4 :	<i>Hfr, metB1, metD88, proA3, relA1, O-purE-metB...)</i> CGSC	IMG-1129
R1met :	<i>Hfr, metB, relA1 (HfrKL25:O-ilv-metB...)</i>	IMG-15	JM683 :	<i>Hfr, fda-1, relA1, del(his-gnd)32, (HfrKL226:O-purE-metB...)</i> IVRKU	IMG-1138
Ra-2 :	<i>Hfr, sfa-4, sfa-5, (- (HfrRa-2:O-sfa-5-metB...))</i>	IMG-133	PF1 :	<i>Hfr, gntM1, metB, relA1, (-r (HfrP4X:O-argF-leu...))</i> CGSC	IMG-1131
AB750 :	<i>Hfr, mal-5, galK2, lacY1, sfa-3 (HfrKL209:O-metA-argH...)</i> YUSM	IMG-113	JC9248 :	<i>Hfr, met, recF143 (HfrP4X:O-argF-leu...)</i> GTU	IMG-1173
AB673 :	<i>Hfr, thi-20, malB16, lac21, leu-6,</i>	IMG-112	CAG12206 :	<i>Hfr, thi-1, relA1, spoT1, supQ80,</i> UWMS	IMG-1176
AB313 :	<i>Hfr, thiA, thr, leu, strA (HfrKL228:O-ntl-xyl...)</i> IBPhM	IMG-111	CAG5051 :	<i>Hfr, thi-1, relA1, spoT1, supQ80,</i> UWMS	IMG-1177
KS133polA :	<i>Hfr, thyA324, polA12(ts), arg, KSM</i>	IMG-1172	CAG12204 :	<i>Hfr, metB1, relA1, btuB3192::UWMS</i>	IMG-1178
			CAG5052 :	<i>Hfr, metB, relA1, btuB3191::Tn10 (HfrKL227:O-proA-leu...)</i> UWMS	IMG-1179

CAG12203 :	<i>Hfr, relA1, zbc-3105::Tn10kan(HfrKL208:O-rac-trp...) UWMS</i>	IMG-1180
CAG5053 :	<i>Hfr, relA1, zbc-280::Tn10(HfrKL208:O-rac-trp...) UWMS</i>	IMG-1181
CAG12202 :	<i>Hfr, thi-1, relA1, O-his-aroD... UWMS</i>	IMG-1182
CAG5054 :	<i>Hfr, thi-1, relA1, O-his-aroD... UWMS</i>	IMG-1183
CAG12200 :	<i>Hfr, thi-1, relA1, O-lysA-argA... UWMS</i>	IMG-1184
CAG5055 :	<i>Hfr, thi-1, relA1, O-lysA-argA... UWMS</i>	IMG-1185
CAG12205 :	<i>Hfr, thi-1, leu-6, gal-6, UWMS</i>	IMG-1186
CAG8209 :	<i>Hfr, thi-1, leu-6, gal-6, UWMS</i>	IMG-1187
CAG12201 :	<i>Hfr, leu, relA1, thi-3178::UWMS</i>	IMG-1188
CAG8160 :	<i>Hfr, leu, relA1, thi-39::Tn10UWMS</i>	IMG-1189
ER :	<i>F+, thi-1, asnA31, asnB32, relA1?CGSC</i>	IMG-2133
CR63 :	<i>F+, supD60</i>	IMG-1175

F- Strains

Escherichia coli B

BL21 : *F-, gal, hsdS BNL* **IMG-2342**

Escherichia coli K-12

W1485 :	<i>F-, prototroph</i>	IMG-2404
KS55 :	<i>F-, thyA, argA, lacY14, rha, str, sup(am), polA12(ts) GI</i>	IMG-2195
802 :	<i>F-, metB1, lacY1, galK2, galT22, supE44, (-</i>	IMG-2131
JC10289 :	<i>F-, thi-1, thr-1, leuB6, CGSC</i>	IMG-2381
POP1375 :	<i>F-, trpA23, supF, recA, srl::Tn10, his(am) IPF</i>	IMG-2380
AB1157 :	<i>F-, thi-1, thr-1, leuB6, hisG4, supE44, (-</i>	IMG-6020
DH5 :	<i>F-, thi-1, gyrA96, supE44, hsdR17, recA1, endA1, relA1</i>	IMG-2406
GM33 :	<i>F-, dam-3, sup88 CGSC</i>	IMG-2317
BR259 :	<i>W3310 dam-3</i>	IMG-2421
GM215 :	<i>F-, thi-1, dam-3, endA1, rna-1, supE44 CGSC</i>	IMG-2318
GM1737 :	<i>F-, dam-4, cycG::Tn5, mal-354tsx-354 CRC (!0,64)</i>	IMG-2442
WA321 :	<i>F-, thi-1, thr-1, leu-6, his-4, strA31, mtl CGSC</i>	IMG-2441
AB1886 :	<i>F-, thi-1, thr-1, leuB6, hisG4, uvrA6 YUSM</i>	IMG-6028
JA209 :	<i>F-, argH1, metE, trpA36, xyl, recA56, strA</i>	IMG-2194
X925 :	<i>F-, thi, thr, leu, lacY, gal, rpsL, supE ORNL</i>	IMG-241
HB101 :	<i>F-, thi-1, proA2, leu-2, ara-14, (-</i>	IMG-2254
P3478 :	<i>F-, polA1, thy</i>	IMG-6033
C600 :	<i>F-, thi-1, thr-1, leuB6, lacY1, tonA21, supE44, (-</i>	IMG-236
C600himA :	<i>F-, thi-1, thr-1, leu-6,</i>	IMG-2281
K37 :	<i>F-, gal, sup-, strA UCB</i>	IMG-2298
K5242 :	<i>F-, gal, sup-, himA81, strA UCB</i>	IMG-2299
DH1 :	<i>F-, thi-1, endA1, hsdR17, supE44, recA1, gyrA96,</i>	IMG-20567

	<i>relA1, (-</i>		
AB2463 :	<i>F-, thi-1, thr-1, leuB6, hisG4,</i>	IMG-2102	PCO150(=H677) : <i>F-, thi-1, trp-45, his-68, CGSC</i>
JC411 :	<i>F-, metB, leu, his, argG, mal, lac, strA UCB</i>	IMG-215	L8(=LA2-22) : <i>F-, thi-1, gltA5, tfr-5, supE44 CGSC</i>
AB1450 :	<i>F-, thi-1, argH, metB1, his-1, str-8 YUSM</i>	IMG-211	KL131 : <i>F-, leuB6, argG6, metB1, araB11, supE44 CGSC</i>
65-2 :	<i>F-, thi, thr, leu, metB, strA, sull MKD</i>	IMG-27	382 : <i>F-, thi-1, thr-1, leuB6, argH1, supE44 CGSC</i>
65-3 :	<i>F-, thi, thr, leu, argH, strA, sull MKD</i>	IMG-28	KY4040 : <i>F-, trpS44, mel-1, supE57?, supF58 CGSC</i>
65-54 :	<i>F-, thi, thr, leu, metB, recA, strA MKD</i>	IMG-29	UB5201 : <i>F-, pro, met, recA56, nalA UNB</i>
J53-1 :	<i>F-, pro, met, nal-r</i>	IMG-2334	HMS174 : <i>F-, hsdR, recA, rif-r BNL</i>
P678 :	<i>F-, thi, thr, leu, strA MI</i>	IMG-223	ED8739 : <i>F-, metB, hsdS, supE, supF BNL</i>
RTS522 :	<i>F-, thi, thr, leu, T1-r, strABUN</i>	IMG-238	2K133 : <i>F-, thi-1, rho-4, lacZ82, gal-33, kdpABC5, trkA133 CGSC</i>
NF58 :	<i>F-, met, arg VNII Genetics</i>	IMG-607	AA100 : <i>F-, thr-1, leuB6, hisG1, argH1, supE44 CGSC</i>
NF59 :	<i>F-, met, arg, relA VNII Genetics</i>	IMG-606	W4546 : <i>F-, nadC8, galT23 CGSC</i>
CP78 :	<i>F-, thi, thr, leu, his, argVNII Genetics</i>	IMG-609	AB2577 : <i>F-, thi-1, ilvD188, metE46, his-4, (-r, supM20, ton-1, strA CGSC</i>
CP79 :	<i>F-, thi, thr, leu, his, arg, relAVNII Genetics</i>	IMG-6011	KRM220 : <i>F-, thi-1, ilv-1, supM20, tsx-3, his-4(ochre) MKD</i>
MKD9201 :	<i>F-, thi-1, lysA22, ptsF, rel-1MKD</i>	IMG-2189	JF238 : <i>F-, ara-55, ((lac)3, gyrA91, relA1, spoT1 CGSC</i>
SA1030 :	<i>F-, thi, his, gal, sup-, strA</i>	IMG-2126	8009 : <i>F-, trp-8, ((lacZ)244, strA, recA56 CSHL</i>
X108 :	<i>F-, his, uraYA287, trpX25, supC, lac, strA GTU</i>	IMG-228	8012 : <i>F-, trp-8, ((lacZ)244, deg-2, strA, recA56 CSHL</i>
QD5003 :	<i>F-, supF, mel1, aux GTU</i>	IMG-290	N2668 : <i>F-, lig, ts7, str-r IBPhM</i>
RW599 :	<i>F-, thi-1, ((pgl-bio), galE</i>	IMG-2292	X5097 : <i>F-, ((pro-lac)XIII, mal, strA, (-r IOGEN</i>
M5000 :	<i>F-, glnA2, trpA9825, strA196 CGSC</i>	IMG-2212	MA70 : <i>F-, araD139, ((argF-lac)205, relA1, strA150, febB CGSC</i>
OS2101 :	<i>F-, thi-1, pyrD34, pss-1, thyA33, galK35, strA118 CGSC</i>	IMG-2238	PB440 : <i>F-, proC14, ilv-290, strA128, ((nadA-uvrB)16 CGSC</i>
MI226a :	<i>F-, thi-1, trp-3, his-4, tsx-3, (-r CGSC</i>	IMG-2239	BM1132 : <i>F-, thi, pheA, alaS3(ts), pyr, spoT UNR</i>
KS28 :	<i>F-, thi, ilv, metE, leu, proC, PNPI</i>	IMG-6036	KS713 : <i>F-, ((trp-att80I), ((his-att80II) LMGE</i>
KH5402 :	<i>F-, ilv, thr, metE, IVRKU</i>	IMG-2283	KLEC-1 : <i>F-, thi, met, trp, pro, his, thy, ((argEC),strA NYUSM</i>
KB30 :	<i>F-, trpAE(tonB), cysB, ((att80)STU</i>	IMG-289	LBG1623 : <i>F-, trp, purC, ilv, rpsL LBG</i>
BM113 :	<i>F-, thi, pheA, alaS3(ts), pyr, relA1, spoT VNII Genetics</i>	IMG-2177	
AT1371 :	<i>F-, thi-1, argE3, his-4, proA2,</i>	IMG-2333	

LBG1082 :	<i>F-, trp, purC</i> LBG	IMG-2355		6, <i>recA1, (-r UCB</i>	
LBG1083 :	<i>F-, trp, purC, rpsL, ((cya)854</i> LBG	IMG-2356	JC5519 :	<i>F-, thi-1, thr-1, leu-6, proA2, recB21, recC22</i> UCB	IMG-6052
LBG1084 :	<i>F-, trp, purC, rpsL, crp</i> LBG	IMG-2357	JC5743 :	<i>F-, thi-1, thr-1, leu-6, proA2, sup-37, recB21</i> GTU	IMG-6038
DF1671 :	<i>F-, his, pgi-2, eda-1, ((edd-zwf),strA, (-r</i> CGSC	IMG-299	JA200recB,recC :	<i>F-, thi, arg, pro, leu, recB, recC</i> LMGE	IMG-6022
LE392 :	<i>F-, metB1, trpR55, lacY1, galK2, VNII</i> Genetics	IMG-2175	JC7623 :	<i>F-, thi-1, thr-1, leu-6, his-4, strA31, recB21, recC22</i> UCB	IMG-2143
ED8869 :	<i>F-, sup-, trpR, hsdRIBPhM</i>	IMG-2153	JC9239 :	<i>F-, thi-1, thr-1, leu-6, proA2, fecF143</i> UCB	IMG-6053
SK1592 :	<i>F-, thi-1, gal-44, lacZ4, ton-58</i> IOGEN	IMG-2319	JC3881 :	<i>F-, thi-1, thr-1, leu-6, proA2, recB21, recC22, recF123, sbcB15</i> UCB	IMG-6054
JC5183 :	<i>F-, gal,recB21, recC22, sbcA5, endA</i>	IMG-2257	JC8471(=KA830) :	<i>F-, thi-1, thr-1, leu-6, strA31, sup-37, recL152</i> UNC	IMG-6082
C600rk-mk- :	<i>F-, thi-1, thr-1, leuB6, IMB</i>	IMG-2130	AB2494 lexA :	<i>F-, thi-1, thr-1, leu-6, strA-31, sup-37, lexA</i> YUSM	IMG-6049
MKD2206 :	<i>F-, argG, strA, hsdR, hsdM</i> MKD	IMG-2315	JC169lex1 :	<i>F-, pro, his, malB, lam, lac, gal, strA, lex-1</i> PNPI	IMG-6023
MKD2231 :	<i>F-, thi-1, his-4, purB15, lacY1, strA35, hsdR, hsdM</i> MKD	IMG-2314	PAM5717 :	<i>F-, thi-1, thr-1, leu-6, proA2, lexA102</i> GTU	IMG-6037
MRE600 :	<i>F-, rna</i>	IMG-2156	DM1187 :	<i>F-, thr, leu, pro, his, ilv, spr-51</i> UNA	IMG-6093
Q13 :	<i>F-, met-1, aux, rna-19, pnp13(ts), tyr451, ts452</i> LMGE	IMG-262	GC3217 :	<i>F-, thr, leu, pro, his, arg,</i>	IMG-6092
HN198 :	<i>F-, aroE,thi</i> UTIMS	IMG-2282	P108 :	<i>F-, thy, metE, polA6</i> LMGE	IMG-2209
CH111 :	<i>F-, thi, trpA36, argH, ade, lac, gal, xyl, tonA, strA, recA</i> MKD	IMG-220	P3478-r :	<i>F-, polA1, thy, colE1-r</i>	IMG G-6057
JC1292 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS</i>	IMG-2450	KS51 :	<i>F-, argA, lac-414, polA12(ts), rha, strA</i> KSM	IMG-6066
JC3417 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS, tolB236</i>	IMG-2443	1348(=159) :	<i>F-, uvrA, gal, supD, strAUWMC</i>	IMG-2104
JC7752 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS, (tolBpal</i>	IMG-2444	E125 :	<i>F-, thi-1, thr-1, leu-6, thyA, dna-13125, strA</i>	IMG-2276
JC7782 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS, (tolA</i>	IMG-2445	LC179 :	<i>F-, thi, thr, leu, thy, ilv, lac, mal, dnaAT46(ts)</i> LMGE	IMG-2132
JC8031 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS, (tolRA(</i>	IMG-2446	CR34dnaB :	<i>F-, thi-1, thr-1, leuB6, dnaB, T4-r</i> PNPI	IMG-6060
JC8056 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS, (lacU169</i>	IMG-2447	PC1-1 :	<i>F-, leu-6, thyA47, dnaC1(ts), dra-3, strA</i> LMGE	IMG-6059
JC8931 :	<i>F-, metB1, gal, lacY, fhuA, supE44, hsdS, (lacU169, ompA::lacZkan</i>	IMG-2448	E101dnaF :	<i>F-, thi, thr, leu, thy, dnaF(ts)</i> IC	IMG-6062
JE5055 :	<i>F-, thi-1, argE3, hisG4, lacY1, xylA5, ((gpt-proA)62, (lpp-254</i>	IMG-2449	PC3 :	<i>F-, leu, thy, dnaG(ts)</i> IC	IMG-6063
JC1553 :	<i>F-, argG6, metB1, his-1, leu-</i>	IMG-218	AX727 :	<i>F-, thy, dnaZ(ts)</i> IC	IMG-6064
			TK603 :	<i>F-, thi-1, thr-1, leu, proA2,</i>	IMG-6073

his-1, supE44

TK612 :	<i>F-, thi-1, thr-1, proA2, his-4, supE44, uvrA6, umuC44</i>	IMG-6075	JF491 :	<i>F-, thi-1, pyrD36, galK30, (asnB50::Tn5) CGSC</i>	IMG-2384
TK610 :	<i>F-, thi-1, thr-1, proA2, his-4, supE44, uvrA6, umuC36</i>	IMG-6074	KS838 :	<i>F-, thi, leu, proC, tsx, lys, metE, lacZ, ara, strA(Tn9-122) KSM</i>	IMG-2385
AB1885 :	<i>F-, thi-1, thr-1, leu-6, proA2, uvrB5, sup-37 YUSM</i>	IMG-6027	RW96:	<i>F-, thi-1, thr-1, leuB6, ((gpt-proA)62recA718, ((umuDC)595:cat</i>	IMG-2420
KI19 :	<i>F-, uvrB506 MKD</i>	IMG-2106	AT2614(=BE280):	<i>F-, ilv-280, trp-37, strA106 CGSC</i>	IMG-2199
KS110 :	<i>F-, trp(ochre), uvrE502 KSM</i>	IMG-6084	D23 :	<i>F-, his-51, trp-30, proA23, lac-28, sloB1, (-r CGSC</i>	IMG-2215
W3110 :	<i>F-, trpR, thrA(am), lac(am), STU</i>	IMG-294	GC146 :	<i>F-, pro, his, metA, malB, lac, gal, str-r LMGE</i>	IMG-6024
AB1884 :	<i>F-, thi-1, thr-1, leu-6, proA2, sup-37 YUSM</i>	IMG-6026	KA830recL152 :	<i>F-, thr-1, leu-6, proA2, recA+, recL152 SUL</i>	IMG-6082
CAG9270 :	<i>F-, thi-1, thr-1, leuB6, lacY1, supE44, tonA21, galK2 UWMC</i>	IMG-2348	MKD9225 :	<i>F-, ilvD188(ochre), his-4sup-42(am) MKD</i>	IMG-2266
CAG9271 :	<i>F-, thi-1, thr-1, leuB6, lacY1, supE44, tonA21, galK, dnaK756 UWMC</i>	IMG-2349	KN126 :	<i>F-, trpE9829(am), tyr(am), ilv, sup-126 IVRKU</i>	IMG-2128
CAG9273 :	<i>F-, thi-1, thr-1, leuB6, lacY1, supE44, tonA21, galK, grpE280 UWMC</i>	IMG-2350	NI708 :	<i>F-, pnp, rna, end, strA, Nb-s NIH</i>	IMG-2137
CAG440(=SC122) :	<i>F-, lac(am), trp(am), str-r UWMC</i>	IMG-2351	MKD9232 :	<i>F-, ((gpt-lac)5, supE44, ((his-att80II) MKD</i>	IMG-2296
MC1061 :	<i>F-, ((lacX)74, galK, galU, rpsL UWMC</i>	IMG-2352	AB468 :	<i>F-, thi-1, his-4, proA2, purD13, CGSC</i>	IMG-256
DS941xerA :	<i>F-, thi-1, thr-1, leuB6, lacZdelM15, xerA3, kan UGL</i>	IMG-2371	2568b :	<i>F-, purD38, thiA, his-4, proA2, xyl-5, tsx-29, sup-48 WUN</i>	IMG-281
DS941xerB :	<i>F-, thi-1, thr-1, leuB6, lacZdelM15, xerB1, kan UGL</i>	IMG-2372	C-2301 :	<i>F-, thyA, tolC, str-r, uvrA UCB</i>	IMG-2262
DS941xerC :	<i>F-, thi-1, thr-1, leuB6, lacZdelM15, xerC1, kan UGL</i>	IMG-2373	(237 :	<i>F-, sup-, galK2, thr::Tn10 CLU</i>	IMG-2368
V66 :	<i>F-, met, his-4, argA, gal, xyl, rpsL31, recF143, FHCRC</i>	IMG-2374	(472 :	<i>F-, sup-, galK2, thr::Tn10 CLU</i>	IMG-2369
WZ306:	<i>F-, strA, alt-1, Tn10 UCB</i>	IMG-2377			
C2367:	<i>F-, thyA, tolC, strA, uvrA::Tn10UCB</i>	IMG-2378			
N99:	<i>F-, argE::Tn10 MKD</i>	IMG-2379			
N116:	<i>F-, thi, gal::IS1 UNFstrA, (malB::Tn5) KSM IMG-2383</i>	IMG-2382			
MH225 :	<i>F-, thiA, flbB, relA, rpsL, araD139, ((ompC::lacZ+)</i>	IMG-2387			
MH2472 :	<i>F-, thiA, flbB, relA, rpsL, araD139, ((ompC::lacZ+)</i>	IMG-2387			
MC4100 :	<i>F-, thiA, flbB5301, relA1,</i>	IMG-2389			

F- Mapping Set

Wild type strain : *Escherichia coli* K-12 MG1655

UWMC

Position of transposon insertion (min)	Strain	Genotype	Collection numbers
00.00	CAG18442	<i>thr-34::Tn10 (Thr-)</i>	IMG-2471
00.00	CAG18425	<i>thr-3091::Tn10kan (Thr-)</i>	IMG-2463
00.75	CAG12093	<i>car-96::Tn10 (Ura-Arg-)</i>	IMG-2407
00.75	CAG18620	<i>car-3092::Tn10kan (Ura-Arg-)</i>	IMG-2557
02.00	CAG12095	<i>zac-3051::Tn10</i>	IMG-2409
02.00	CAG12131	<i>zac-3093::Tn10kan</i>	IMG-2431
03.50	CAG12025	<i>zad-220::Tn10,panD</i>	IMG-2390
03.50	CAG12105	<i>zad-3094::Tn10kan</i>	IMG-2413
04.75	CAG18436	<i>zae-502::Tn10</i>	IMG-2469
04.75	CAG18580	<i>zae-3095::Tn10kan</i>	IMG-2542
06.25	CAG18447	<i>proAB81::Tn10 (Pro-)</i>	IMG-2472
06.25	CAG18515	<i>proAB3096::Tn10kan (Pro-)</i>	IMG-2509
06.75	CAG18633	<i>zag-3198::Tn10kan</i>	IMG-2562
07.75	CAG12080	<i>zah-281::Tn10</i>	IMG-2405
08.00	CAG18439	<i>lac142::Tn10, lacZU118</i>	IMG-2470
08.00	CAG18420	<i>lac13098::Tn10kan, lacZU118</i>	IMG-2461
09.00	CAG18091	<i>zaj-3053::Tn10, proC</i>	IMG-2457
09.00	CAG18594	<i>zaj-3099::Tn10kan, proC</i>	IMG-2544
09.50	CAG12148	<i>tsx-247::Tn10</i>	IMG-2435
09.50	CAG18413	<i>tsx-3100::Tn10kan</i>	IMG-2460
10.50	CAG12017	<i>zba-3054::Tn10</i>	IMG-2387
10.50	CAG12107	<i>zba-3101::Tn10kan</i>	IMG-2415
12.00	CAG12154	<i>zbb-3055::Tn10</i>	IMG-2440
12.25	CAG12171	<i>purE79::Tn10 (Pur-)</i>	IMG-2448
12.25	CAG18566	<i>purE3200::Tn10kan</i>	IMG-2529
13.25	CAG12021	<i>zbc-3105::Tn10</i>	IMG-2389
13.25	CAG12116	<i>zbc-3200::Tn10kan</i>	IMG-2422
14.50	CAG12149	<i>zbd-601::Tn10</i>	IMG-2436
14.50	CAG18421	<i>zbd-3104::Tn10kan</i>	IMG-2462
15.75	CAG12077	<i>zbe-280::Tn10</i>	IMG-2402
15.75	CAG12123	<i>zbe-3105::Tn10kan</i>	IMG-2426
16.25	CAG18433	<i>zbf-3057::Tn10</i>	IMG-2468
16.25	CAG18514	<i>zbf-3106::Tn10kan</i>	IMG-2508
16.75	CAG12147	<i>nadA57::Tn10</i>	IMG-2434
16.75	CAG18341	<i>nadA3052::Tn10kan</i>	IMG-2458
17.75	CAG18493	<i>zbh-29::Tn10</i>	IMG-2500
17.75	CAG18531	<i>zbh-3108::Tn10-kan</i>	IMG-2516
18.75	CAG12034	<i>zbi-3058::Tn10</i>	IMG-2395
18.75	CAG12112	<i>zbi-3109::Tn10kan</i>	IMG-2419
20.00	CAG18478	<i>zbj-1230::Tn10</i>	IMG-2491
20.00	CAG18528	<i>zbj-3110::Tn10kan</i>	IMG-2515
21.00	CAG12094	<i>zcb-3059::Tn10</i>	IMG-2408
21.00	CAG12130	<i>zcb-3111::Tn10kan</i>	IMG-2430
21.75	CAG18466	<i>zcc-282::Tn10</i>	IMG-2484
21.75	CAG18613	<i>zcc-3112::Tn10kan</i>	IMG-2553
22.75	CAG18703	<i>putP5::Tn5</i>	IMG-2570
24.25	CAG12078	<i>zce-726::Tn10</i>	IMG-2403
24.25	CAG12124	<i>zce-3113::Tn10kan</i>	IMG-2427
25.25	CAG18463	<i>zcf-117::Tn10</i>	IMG-2481
25.25	CAG18516	<i>zcf-1314::Tn10kan</i>	IMG-2510
25.75	CAG18497	<i>fadR13::Tn10</i>	IMG-2503
25.75	CAG18544	<i>fadR3115::Tn10kan</i>	IMG-2517
26.75	CAG12016	<i>zcg-3060::Tn10</i>	IMG-2386
26.75	CAG12106	<i>zcg-3116::Tn10kan</i>	IMG-2414
27.25	CAG12169	<i>zch-506::Tn10</i>	IMG-2447

27.25	CAG18551	<i>zch-3117::Tn10kan</i>	IMG-2518	45.75	CAG12179	<i>mgl-500::Tn10</i>	IMG-2453
28.00	CAG18579	<i>trp-3117::Tn10kan</i>	IMG-2541	46.50	CAG12098	<i>zeg-722::Tn10</i>	IMG-2410
28.50	CAG12028	<i>zci-233::Tn10</i>	IMG-2393	46.50	CAG12100	<i>zeg-3130::Tn10kan</i>	IMG-2412
29.50	CAG12081	<i>zcg-3061::Tn10</i>	IMG-2406	47.75	CAG12177	<i>zeh-298::Tn10</i>	IMG-2452
31.00	CAG12026	<i>trg-2::Tn10</i>	IMG-2391	47.75	CAG18577	<i>zeh-3142::Tn10kan</i>	IMG-2539
31.00	CAG12108	<i>trg-3120::Tn10kan</i>	IMG-2416	48.50	CAG12178	<i>zei-723::Tn10</i>	IMG-2574
32.00	CAG18576	<i>zdc-3117::Tn10kan</i>	IMG-2538	48.50	CAG12183	<i>zei-3143::Tn10kan</i>	IMG-2455
32.75	CAG12027	<i>zdd-230::Tn9</i>	IMG-2392	49.50	CAG18484	<i>zej-223::Tn10</i>	IMG-2495
33.50	CAG18459	<i>zde-234::Tn10</i>	IMG-2478	49.50	CAG18552	<i>zej-3144::Tn10kan</i>	IMG-2519
34.50	CAG18637	<i>zdf-3062::Tn5</i>	IMG-2564	50.50	CAG18483	<i>fadL771::Tn10</i>	IMG-2494
35.75	CAG18462	<i>zdg-603::Tn10</i>	IMG-2480	51.00	CAG18467	<i>zfb-1::Tn10</i>	IMG-2485
35.75	CAG18567	<i>zdg-3121::Tn10kan</i>	IMG-2530	51.00	CAG18522	<i>zfb-3135::Tn10kan</i>	IMG-2512
36.00	CAG18629	<i>zdg-3198::Tn10kan</i>	IMG-2558	51.75	CAG18468	<i>nupC510::Tn10</i>	IMG-2486
37.50	CAG12151	<i>zdh-925::Tn10</i>	IMG-2437	51.75	CAG18565	<i>nupC3146::Tn10kan</i>	IMG-2528
37.50	CAG18568	<i>zdh-3122::Tn10kan</i>	IMG-2531	52.75	CAG18632	<i>zfc-3071::Tn10kan</i>	IMG-2561
38.25	CAG18464	<i>zdi-276::Tn10</i>	IMG-2482	53.25	CAG18470	<i>purC80::Tn10 (Pur-)</i>	IMG-2488
38.25	CAG18518	<i>zdi-3123::Tn10kan</i>	IMG-2511	53.25	CAG18524	<i>purC3137::Tn10kan (Pur-)</i>	IMG-2513
39.50	CAG18465	<i>zdj-225::Tn10</i>	IMG-2483	54.00	CAG18631	<i>zfe-3138::Tn10kan</i>	IMG-2560
39.50	CAG18578	<i>zdj-3124::Tn10kan</i>	IMG-2540	54.50	CAG18469	<i>gua-26::Tn10 (Gua-)</i>	IMG-2487
40.25	CAG12074	<i>zea-3068::Tn10</i>	IMG-2401	55.00	CAG18481	<i>zff-208::Tn10</i>	IMG-2493
40.25	CAG12122	<i>zea-3125::Tn10kan</i>	IMG-2425	55.00	CAG18570	<i>zff-3139::Tn10kan</i>	IMG-2533
40.75	CAG18486	<i>eda-51::Tn10</i>	IMG-2496	55.75	CAG18480	<i>nadB51::Tn10</i>	IMG-2492
40.75	CAG18561	<i>eda-3126::Tn10kan</i>	IMG-2525	55.75	CAG18412	<i>nadB3140::Tn10kan</i>	IMG-2459
41.25	CAG12068	<i>zeb-3190::Tn10</i>	IMG-2397	56.75	CAG12158	<i>pheA18::Tn10</i>	IMG-2442
41.25	CAG12126	<i>zeb-3199::Tn10kan</i>	IMG-2428	56.75	CAG18608	<i>pheA3141::Tn10kan (Phe-)</i>	IMG-2550
42.25	CAG12156	<i>uvrC279::Tn10</i>	IMG-2441	57.50	CAG18642	<i>zfh-3131::Tn10</i>	IMG-2568
43.00	CAG18451	<i>zed-3069::Tn10</i>	IMG-2474	58.25	CAG18562	<i>zfi-3143::Tn10kan</i>	IMG-2526
43.00	CAG18563	<i>zed-3128::Tn10kan</i>	IMG-2527	59.25	CAG12173	<i>cysC95::Tn10 (Cys-)</i>	IMG-2449
44.25	CAG12099	<i>zee-3129::Tn10</i>	IMG-2411	59.25	CAG12182	<i>cysC3152::Tn10kan (Cys-)</i>	IMG-2454
44.25	CAG12176	<i>zee-3189::Tn10kan</i>	IMG-2451	60.50	CAG12079	<i>fuc-3072::Tn10</i>	IMG-2404

60.50	CAG12115	<i>fuc-3154::Tn10kn</i>	IMG-2421	81.75	CAG18572	<i>zic-3161::Tn10kan</i>	IMG-2535
60.75	CAG12135	<i>recD1901::Tn10</i>	IMG-2433	83.00	CAG18499	<i>zid-501::Tn10</i>	IMG-2505
62.00	CAG18709	<i>zgc-3074::Tn10</i>	IMG-2571	83.00	CAG18558	<i>zid-3162::Tn10kan</i>	IMG-2522
63.50	CAG12168	<i>zgd-210::Tn10</i>	IMG-2446	83.75	CAG18501	<i>zie-296::Tn10</i>	IMG-2507
63.50	CAG18604	<i>zgd-3156::Tn10kan</i>	IMG-2547	84.50	CAG18431	<i>ilv-500::Tn10 (IIV-)</i>	IMG-2467
64.25	CAG18472	<i>nupG511::Tn10</i>	IMG-2489	84.50	CAG18599	<i>ilv-3164::Tn10kan (IIV-</i>	IMG-2545
64.25	CAG18559	<i>nupG3157::Tn10kan</i>	IMG-2523	85.50	CAG18491	<i>metE3079::Tn10 (Met-</i>	IMG-2498
65.00	CAG18527	<i>metC3158::Tn10kan</i>	IMG-2514	86.25	CAG18496	<i>fadAB101::Tn10</i>	IMG-2502
66.25	CAG12184	<i>tolC210::Tn10</i>	IMG-2456	86.25	CAG18557	<i>fadAB3165::Tn10kan</i>	IMG-2521
67.00	CAG18574	<i>zgh-3159::Tn10kan</i>	IMG-2537	87.00	CAG18495	<i>zih-35::Tn10</i>	IMG-2501
68.75	CAG12072	<i>zgj-203::Tn10</i>	IMG-2399	87.00	CAG18601	<i>zih-3166::Tn10kan</i>	IMG-2546
68.75	CAG12127	<i>zgj-3198::Tn10kan</i>	IMG-2429	87.50	CAG18636	<i>zii-3088::Tn10kan</i>	IMG-2563
70.00	CAG12153	<i>zha-6::Tn10</i>	IMG-2439	88.50	CAG18477	<i>zij-501::Tn10, metF159</i>	IMG-2490
70.00	CAG18605	<i>zha-3168::Tn10kan</i>	IMG-2548	88.50	CAG18560	<i>zij-3167::Tn10kan, metF19</i>	IMG-2524
71.75	CAG12071	<i>zhb-3082::Tn10</i>	IMG-2398	89.50	CAG12185	<i>argE86::Tn10 (Arg-)</i>	IMG-2573
71.75	CAG12120	<i>zhb-3169::Tn10kan</i>	IMG-2424	90.25	CAG18500	<i>thi-39::Tn10</i>	IMG-2506
72.00	CAG12159	<i>zhc-9::Tn10</i>	IMG-2443	90.25	CAG18618	<i>thi-3178::Tn10kan</i>	IMG-2555
72.00	CAG18606	<i>zhc-3170::Tn10kan</i>	IMG-2549	90.75	CAG18498	<i>zjb-504::Tn10</i>	IMG-2504
72.75	CAG12133	<i>zhd-3171::Tn10kan</i>	IMG-2432	90.75	CAG18615	<i>zjb-3179::Tn10kan</i>	IMG-2554
74.00	CAG18456	<i>zhe-3084::Tn10, cysG</i>	IMG-2476	91.50	CAG12164	<i>malF3089::Tn10</i>	IMG-2445
74.75	CAG18452	<i>zhe-3085::Tn10</i>	IMG-2475	91.50	CAG18609	<i>malF3180::Tn10kan</i>	IMG-2551
75.75	CAG18450	<i>zhf-50::Tn10</i>	IMG-2473	92.00	CAG12119	<i>malE::Tn10kan</i>	IMG-2423
75.75	CAG18573	<i>zhf-3174::Tn10kan</i>	IMG-2536	92.50	CAG18630	<i>zjc-3181::Tn10kan</i>	IMG-2559
76.50	CAG18638	<i>zhg-3086::Tn10</i>	IMG-2565	93.75	CAG18488	<i>zjd-2231::Tn10</i>	IMG-2497
77.75	CAG18639	<i>zhi-3087::Tn10kan</i>	IMG-2566	93.75	CAG18571	<i>zjd-3182::Tn10kan</i>	IMG-2534
78.50	CAG18640	<i>zhj-3076::Tn10</i>	IMG-2567	94.50	CAG18427	<i>zje-2241::Tn10</i>	IMG-2464
80.00	CAG12175	<i>zia-3077::Tn10kan</i>	IMG-2450	94.50	CAG18555	<i>zje-3183::Tn10kan</i>	IMG-2520
80.75	CAG12163	<i>zib-207::Tn10</i>	IMG-2444	95.75	CAG12073	<i>cycA30::Tn10</i>	IMG-2400
80.75	CAG18569	<i>zib-3160::Tn10kan</i>	IMG-2532	95.75	CAG12114	<i>cycA3185::Tn10kan</i>	IMG-2420
81.75	CAG18492	<i>zic-4901::Tn10</i>	IMG-2499	96.75	CAG12019	<i>zjh-920::10</i>	IMG-2388

98.25	CAG18429	<i>zji-6::Tn10</i>	IMG2465
98.25	CAG18610	<i>zji-3187::Tn10kan</i>	IMG-2552
99.50	CAG18430	<i>zji-202::Tn10</i>	IMG-2466
99.50	CAG18619	<i>zji-3188::Tn10kan</i>	IMG-2556

F'Strains

Escherichia coli K-12

JM103 :	<i>F', thi, ((lac-pro), strA,</i>	IMG-342
JM105 :	<i>F', thi, ((lac-proAB), endA1,</i>	IMG-335
JM109 :	<i>F', thi, ((lac-proAB), endA1, proAB+,lacIq,lacZ(M15)</i>	IMG-336
JM110 :	<i>F', thi-1, thr, leu, ara, galT, (F'traD36,proAB+,lacIq,((lacZM15)</i>	IMG-3106
TG1 :	<i>F', thi, ((lac-proAB), hsdR4(del5), lacZ(M15)</i>	IMG-341
XL1-Blue :	<i>F', thi, lac, supE44, hsdR17, (F':Tn10,proAB,lacIq,((lacZ(M15)</i>	IMG-344
DH5a(F') :	<i>F', thi-1,((lacU169), (F':proAB+,lacIq)</i>	IMG-3104
Sure:	<i>F', thi-1, lac, supE44, hsdR, recB, (F',proAB, lacIq,lacZ(M15, Tn10)</i>	IMG-3105
KLF4/AB2463:	<i>F', thi-1, thr-1, leuB6, CGSC</i>	IMG-321
KL723:	<i>F', thi-1, leuB6, hisG4, argE3, recA13 (F'104:thr+,argF+) CGSC</i>	IMG-340
W1665:	<i>F', thi, trpA36, argH, ade, (F':lac+)</i>	IMG-326
F'35/CH111:	<i>F', thi, trpA36, argH, ade, (F'35:lac+,ts114) MKD</i>	IMG-323
KL703:	<i>F', thi-1, trp-45, his-68, pyrD34, (F'126:nadA1+,recE+) CGSC</i>	IMG-339
KLF48/KL158:	<i>F', thi-1, argE3, his-4, (F'148:his+) CGSC</i>	IMG-322
KLF3/JC1553:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-315
KLF29/JC1553:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-316
DFF1/JC1553:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-317
KLF43/KL259:	<i>F', thi-1, tyrA-2, purD34, recA1 (F'143:lysA+,tyrA+) CGSC</i>	IMG-311
KLF2/JC1553:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-312
KLF41/JC1553:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-313
MAF1/JC1553:	<i>F', argG6, metB1, his-1, (F'140:fdA+,argG+,xyl+) CGSC</i>	IMG-314
KLF22/KL110:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-318
KLF11/JC1553:	<i>F', argG6, metB1, his-1, CGSC</i>	IMG-385
F'14/CH111:	<i>F', thi, trpA36, argH, ade, (F'14:ilv+,argEC+)</i>	IMG-32
KLF18/KL132:	<i>F', thi-1, thr-1, CGSC</i>	IMG-320

NM522:	<i>F', thi, del(lac-proAB), supE, hsdS, supE (F':proAB+,lacIq,lacZdelM15) STG</i>	IMG-343
KL719(=ORF4/K L251):	<i>F', thi-1, metE70, (F'254:lac+,lip+)</i>	IMG-332
FLT/706:	<i>F', thi, thr, leu, his, (F'46:lac+,Tn10) LMGE</i>	IMG-3103
KLF5/AB2463:	<i>F', thi-1, thr-1, leuB6, hisG4, CGSC</i>	IMG-37

Phage-Bearing Strains

Escherichia coli C

C117 : *F-, protothroph(P2)* **IMG-5177**

Escherichia coli K-12

AU(0) :	<i>HfrH, argH, ura(+) GTU</i>	IMG-51
CA150(:	<i>HfrH, thi, lacZ(ochre), supD(GTU</i>	IMG-517
X108 :	<i>F-, his, trp, ura, lac, supC, strA GTU</i>	IMG-515
W3350(imm434) :	<i>F-, gal-2(imm434) IBPhM</i>	IMG-535
CR34/45((cl857) :	<i>F-, thr, leu, thy, lac, strA, T4-r((c1857) GTU</i>	IMG-53
M65-1 :	<i>F-, mal, gal((cl857,Sam7) GTU</i>	IMG-56
QD5003((Y199) :	<i>F-, sulII, mel-1NIH</i>	IMG-518
D1210HP :	<i>F-, thi-1, proA2, leu-2, lacIq, kil,cl857) CLU</i>	IMG-560
C600((att80) :	<i>F-, thi-1, thr-1, ((att80,cl857,Sam7) LMGE</i>	IMG-510
CA150((h80,cl857) :	<i>HfrH, thi, GTU</i>	IMG-512
JM83 :	<i>F-, thi, ara, ((lac-pro), strA(</i>	IMG-5559
MKD9559 :	<i>Hfr, argH, metA128, purE, sup- 16((att80,cl857,Sam7) MKD</i>	IMG-5556
MKD9573 :	<i>F-, thi-1, his-4, proA2, ((cl857, Sam7) MKD</i>	IMG-5542

MKD9562 :	<i>F-, trpE9829(am), tyr(am), hys, ((att80,cl857,Sam7) MKD</i>	IMG-5537
MKD9588 :	<i>F-, ilvD188, his4, trp- 3, argB, MKD</i>	IMG-5555
594((gt4):	<i>F-, supO ((gt4,Sam7,lop11,lig+) STU</i>	IMG-5558
MKD9560:	<i>F-, his-68, argH, met- 128, MKD</i>	IMG-5536
NO1267 :	<i>F-, thi, lac, gal, kdpABC+, ((cl857,Sam7) UWMC</i>	IMG-5557
MKD151 :	<i>HfrH, ura, metB((h80metB+)((h8 0,cl857) MKD</i>	IMG-5533
N114 :	<i>F-, metB, ppc, ((argECBH)((NYUSM</i>	IMG-5532
N13 :	<i>F-, metB, ppc, ((argECBH)((NYUSM</i>	IMG-5530
N49 :	<i>F-, metB, ppc, ((argECBH)NYUSM</i>	IMG-5531
N1741 :	<i>F-, lac(amber), trp(amber), su111UWMC</i>	IMG-5214
KRM53 :	<i>F-, metB, argH, his, strA, rif-rMKD</i>	IMG-5219
KR151 :	<i>F-, his, metB, lacY, xyl, strAMKD</i>	IMG-5288
KR157 :	<i>F-, ilv, his, trp, argH, supM+MKD</i>	IMG-5461
W3110(P1Cm) :	<i>F-, prototroph (P1Cm- r)clr100)</i>	IMG-5171
C600((ucts62) :	<i>F-, thi-1, thr-1, leuB6, lacY1, supE44, tonA21((ucts62) CSHL</i>	IMG-5159
MKD7701 :	<i>F-, nus-1, galKT, strA((b221, cl857 rex::Tn3) LMGE</i>	IMG-61058
MKD7702 :	<i>F-, nus-1, galKT, strA((b221, cl857 rex::Tn5) LMGE</i>	IMG-61057
MKD7703 :	<i>F-, nus-1, galKT, strA((b221,cl857 rex::Tn9) LMGE</i>	IMG-61059

The Strains with Mutations in RNA Polymerase, DNA Gyrase and Heat Shock Genes

Escherichia coli B

(238:	<i>F</i> -, <i>sup</i> -, <i>galK2</i> , <i>thr::Tn10</i> , <i>dnaK7</i> CLU 123	IMG- 20609
WK45dnaK7 :	<i>F</i> -, <i>sup</i> -, <i>galK2</i> , <i>dnaK7(ts)CLU</i>	IMG- 2338

Escherichia coli K-12

HN315:	<i>F</i> -, <i>thi</i> , <i>aroE</i> , <i>strA</i> , <i>rpoA(ts101)UTIMS</i>	IMG-20493
HN317:	<i>F</i> -, <i>thi</i> , <i>aroE</i> , <i>strA</i> , <i>rpoA(ts112)UTIMS</i>	IMG-20494
AB1452 (=MKD1278):	<i>F</i> -, <i>his</i> , <i>ilvD</i> , <i>metB</i> , <i>strA</i> , <i>rpoB11(rif-r-1) MKD</i>	IMG-20262
AB1456:	<i>F</i> -, <i>thi</i> , <i>his</i> , <i>ilv</i> , <i>metB</i> , <i>argH</i> , <i>rpoB(rif-r-5) MKD</i>	IMG-20272
RAB41:	<i>F</i> -, <i>argH</i> , <i>metB</i> , <i>his</i> , <i>ilvD</i> , <i>strA</i> , <i>rpoB252(rif-r-41)</i> <i>MKD</i>	IMG-20292
22-13arg:	<i>F</i> -, <i>argH</i> , <i>strA</i> , <i>rpoB22(ts22)MKD</i>	IMG-20181
MKD3261 (=OD241):	<i>F</i> -, <i>his-1</i> , <i>lacY1</i> , <i>supE</i> , <i>MKD</i>	IMG-20197
65-15arg:	<i>F</i> -, <i>argH</i> , <i>strA</i> , <i>rpoB165(ts65)MKD</i>	IMG-20201
ts71-1arg:	<i>F</i> -, <i>argH</i> , <i>strA</i> , <i>rpoB171(ts71)MKD</i>	IMG-20207
ts-143arg:	<i>F</i> -, <i>argH</i> , <i>strA</i> , <i>rpoB143(ts143)MKD</i>	IMG-20211
RAB1:	<i>F</i> -, <i>thi</i> , <i>argH</i> , <i>metB</i> , <i>his</i> , <i>ilvD</i> , <i>rpoB11 (rif-r-11)</i> , <i>strA</i> <i>MKD</i>	IMG-20285
RAB3:	<i>F</i> -, <i>thi</i> , <i>argH</i> , <i>metB</i> , <i>his</i> , <i>ilvD</i> , <i>rpoB(rif-r-3)</i> , <i>strA</i> <i>MKD</i>	IMG-20286
RAB11:	<i>F</i> -, <i>thi</i> , <i>argH</i> , <i>metB</i> , <i>his</i> , <i>ilvD</i> , <i>ilvD</i> , <i>rpoB(rif-r-11)</i> <i>strA MKD</i>	IMG-20289
C600-17:	<i>F</i> -, <i>thi-1</i> , <i>thr-1</i> , <i>leuB6</i> , <i>lacY1</i> , <i>MKD</i>	IMG-20327
MKD8254:	<i>F</i> -, <i>thi-1</i> , <i>argH1</i> , <i>ilvD16</i> , <i>his-1</i> , (<i>rifD21</i>) <i>MKD</i>	IMG-20374
MKD1265:	<i>F</i> -, <i>thi</i> , <i>argH</i> , <i>lac</i> , <i>rpoB256(rifD29) MKD</i>	IMG-20389
29/CH111:	<i>F</i> -, <i>argH</i> , <i>trp</i> , <i>ade</i> , <i>lac</i> , <i>recAstrA(F'29:purD+,argH</i> <i>+,rifD29) MKD</i>	IMG-358

K230:	<i>F</i> -, <i>argH</i> , <i>metB</i> , <i>ilv</i> , <i>his</i> , <i>strA</i> , <i>MKD</i>	IMG-20126
K445:	<i>F</i> -, <i>his</i> , <i>ilv</i> , <i>argH</i> , <i>metB</i> , <i>strA</i> , <i>MKD</i>	IMG-20130
K455:	<i>F</i> -, <i>argH</i> , <i>metB</i> , <i>ilv</i> , <i>his</i> , <i>strA</i> , <i>MKD</i>	IMG-20140
K386:	<i>F</i> -, <i>argH</i> , <i>metB</i> , <i>ilv</i> , <i>his</i> , <i>strA</i> , <i>MKD</i>	IMG-20142
OD18:	<i>F</i> -, <i>metB</i> , <i>recA</i> , <i>rpoB18(stl-</i> <i>r-18)MKD</i>	IMG-20305
ST4 (=F'4/JC1553):	<i>F</i> -, <i>argG6</i> , <i>metB1</i> , <i>his-1</i> , <i>stl-r-18) MKD</i>	IMG-351
RB1835:	<i>F</i> -, <i>thi</i> , <i>his</i> , <i>ilv</i> , <i>metB</i> , <i>stl-r-</i> <i>18</i> , <i>rif-r-18</i> , <i>strA MKD</i>	IMG-20308
135:	<i>F</i> -, <i>argH</i> , <i>recA</i> , <i>rpoB19(rif-</i> <i>r-18)</i> , <i>rpoB18(stl-r-18)</i> <i>MKD</i>	IMG-20304
RS6 (=F'6/JC1553):	<i>F</i> -, <i>argG6</i> , <i>metB1</i> , <i>his-1</i> , <i>MKD</i>	IMG-350
W31107 (=No3284):	<i>F</i> -, <i>metE::Tn10</i> , <i>del(rpoB)1570-1 QMC</i>	IMG-20329
C747:	<i>F</i> -, <i>thi-1</i> , <i>thr-1</i> , <i>leuB6</i> , <i>lacY1</i> , <i>rpoB2004</i> , <i>rpoB255</i> <i>MKD</i>	IMG-20330
C619:	<i>F</i> -, <i>thi-1</i> , <i>thr-1</i> , <i>leuB6</i> , <i>lacY1</i> , <i>rpoB2003</i> , <i>rpoB1021 MKD</i>	IMG-20331
C700 (=MKD10700):	<i>F</i> -, <i>argH</i> , <i>rpoB::380bp</i> , <i>str-</i> <i>r MKD</i>	IMG-20332
AJ5257:	<i>F</i> -, <i>metB</i> , <i>argG</i> , <i>lacZ(am)</i> , <i>strA</i> , <i>ilv+</i> , <i>argH+</i> <i>QMC</i>	IMG-399
AJ5287:	<i>F</i> -, <i>metB</i> , <i>argG</i> , <i>lacZ(am)</i> , <i>strA</i> , <i>ilv+</i> , <i>argH+</i> <i>QMC</i>	IMG-398
AJ5900:	<i>F</i> -, <i>metB</i> , <i>argG</i> , <i>lacZ(am)</i> , <i>strA</i> , <i>QMC</i>	IMG-3101
AJ6207:	<i>F</i> -, <i>metB</i> , <i>argG</i> , <i>lacZ(am)</i> , <i>strA</i> , <i>QMC</i>	IMG-3100
HB101(pRC1):	<i>R</i> +, <i>thi-1</i> , <i>proA2</i> , <i>leuB6</i> , <i>rpoB1001,Ap) MKD</i>	IMG-61839
T16:	<i>F</i> -, <i>thi-1</i> , <i>strA</i> , <i>rpoC1(tsx)MKD</i>	IMG- 2010
GTF/H-1:	<i>F</i> -, <i>ilvD</i> , <i>metB</i> , <i>argH</i> , <i>lac</i> , <i>recA</i> , <i>strA(F'GTF:argH+.rpoB+,r</i> <i>poC1) MKD</i>	IMG-363
MKD3251 (=TBR2):	<i>F</i> -, <i>argH</i> , <i>rpoB251</i> , <i>rpoC</i> , <i>his MKD</i>	IMG-2024
162CS (=K162):	<i>F</i> -, <i>his</i> , <i>ilv</i> , <i>argH</i> , <i>metB</i> , <i>rpoC3(cs1) MKD</i>	IMG-20111

K328:	<i>F-</i> , <i>argH</i> , <i>metB</i> , <i>ilv</i> , <i>his</i> , <i>strA</i> , <i>lac</i> , <i>mal</i> , <i>gal</i> , <i>xyl</i> , <i>rpoC263 MKD</i>	IMG-20144	N4177:	<i>F-</i> , <i>gyrB(ts)</i> NIH IHMC	IMG-20563
K-294:	<i>F-</i> , <i>argH</i> , <i>metB</i> , <i>ilv</i> , <i>his</i> , <i>strA</i> , <i>MKD</i>	IMG-20136	NS108groE1:	<i>F'</i> , <i>groE1(F':supE,mal+)</i>	IMG- 310
MX782:	<i>F-</i> , <i>rpoC325</i> , <i>btuB</i> , <i>leu(am)</i> , <i>tsx</i> , <i>supD43,74</i> , <i>sueB JHU</i>	IMG-2081	B178groE7:	<i>F-</i> , <i>sup-</i> , <i>galE</i> , <i>groE7GTU</i>	IMG-20602
MX784:	<i>F-</i> , <i>rpoC325</i> , <i>btuB</i> , <i>leu(am)</i> , <i>JHU</i>	IMG- 2082	B178groE30:	<i>F-</i> , <i>sup-</i> , <i>galE</i> , <i>groE30GTU</i>	IMG-20603
JC10092:	<i>F-</i> , <i>rpoC92</i> , <i>thi</i> , <i>thr</i> , <i>leu</i> , <i>trp</i> , <i>xyl</i> , <i>mal</i> , <i>tonA</i> , <i>supE</i> , <i>rpsL</i> <i>NIG</i>	IMG- 2080	B178groE97:	<i>F-</i> , <i>sup-</i> , <i>galE</i> , <i>groE97GTU</i>	IMG-20604
KY1411:	<i>F-</i> , <i>ilv</i> , <i>thr</i> , <i>metE</i> , <i>trpE9829(am)</i> , <i>IVRKU</i>	IMG-20495	B178groE140:	<i>F-</i> , <i>sup-</i> , <i>galE</i> , <i>groE140GTU</i>	IMG-20605
PB1rpoD800:	<i>F-</i> , <i>rpoD800</i> , <i>strA</i> , <i>his</i> , <i>argG</i> , <i>mal</i> <i>UWMC</i>	IMG-20454	B178groE673:	<i>F-</i> , <i>sup-</i> , <i>galE</i> , <i>groE673GTU</i>	IMG-20606
285c:	<i>F-</i> , <i>thi</i> , <i>argG</i> , <i>lac</i> , <i>rpoD285(ts)UCB</i>	IMG-20473	B178groE764:	<i>F-</i> , <i>sup-</i> , <i>galE</i> , <i>groE764GTU</i>	IMG-20607
PM-90:	<i>F-</i> , <i>argG</i> , <i>thi</i> , <i>lac</i> , <i>rpoD285(ts)</i> , <i>Tn10</i> <i>UCB</i>	IMG-20472			
K165:	<i>F-</i> , <i>lac(am)</i> , <i>trp(am)</i> , <i>phorpoH(am)</i> , (<i>htpR165</i>) <i>UWMC</i>	IMG-20498			
MC4100htpR15 :	<i>F-</i> , <i>araD139</i> , <i>del(argF-</i> <i>ptsF</i> , <i>rbsR</i> , <i>rpoH15</i> , <i>zhf50:Tn10</i> <i>UBC</i>	IMG-20502			
CAG481:	<i>F-</i> , <i>lac(am)</i> , <i>trp(am)</i> , <i>rpoD800</i> , <i>Tn10</i> , <i>rpoH165</i> <i>UWMC</i>	IMG-20499			
CAG9333:	<i>F-</i> , <i>araD139</i> , <i>del(argF-</i> <i>lac)U169</i> , <i>rpoH15</i> , <i>zhf50:Tn10</i> , <i>del(rpo HR40)</i> <i>UWMC</i>	IMG-20500			
CAG9335:	<i>F-</i> , <i>araD139</i> , <i>del(argF-</i> <i>lac)U169</i> , <i>UWMC</i>	IMG-20501			
PSU4 (= W3110rho10 4):	<i>F-</i> , <i>trpR</i> , <i>trpE</i> , <i>trpA</i> , <i>STU</i>	IMG-20450			
AD1600 (= SA1030rho15)):	<i>F-</i> , <i>sup-</i> , <i>rho15(ts)</i> , <i>his</i> , <i>thi</i> , <i>galP-E3::IS2</i> <i>NIH</i>	IMG-20451			
MKD5254 (= MS4):	<i>F-</i> , <i>metB</i> , <i>recA</i> , <i>pyrE4</i> , <i>gyrB(cou-r-1)</i> , <i>strA</i> <i>MKD</i>	IMG-20556			
MKD5255 (= MS9):	<i>F-</i> , <i>metB</i> , <i>argH</i> , <i>gyrB</i> , <i>(cou-d)</i> , <i>recA</i> , <i>strA</i> <i>MKD</i>	IMG-20554			
MKD5154 (= MS14):	<i>Hfr</i> , <i>pyrE41</i> , <i>gyrB</i> <i>(ts)(HfrKL226:O-purE-</i> <i>metB...)</i> <i>MKD</i>	IMG-1137			
MKD5256 (DG4):	<i>F-</i> , <i>metB</i> , <i>argH</i> , <i>his</i> , <i>pyrE41</i> , <i>gyrB(ts)</i> , <i>strA</i> <i>MKD</i>	IMG-20560			

Plasmids

Key:

- 1 Plasmid name
- 2 IMG accession number
- 3 Incompatibility group / Molecular weight
- 4 Phenotype
- 5 Host strain
- 6 Extra information: original host/properties/how derived or constructed
- 7 Reference(s) up to 2

R1drd19	IMG-6265 FII Ap Cm Km Sm Sp Su 153P70 drd mutant of R1 Meynell E & Datta N Nature 214: 885-887	
R6K	IMG-6686 X Ap Sm ECO K12 J62 : lac28 proA23 his51 trp30 rpsL Escherichia coli Kontomichalou P et al J Bacteriol 104: 34-44	26.0 Md
R16	IMG-6431 B Ap Tc Sm Sp Su ECO K12 J53 Escherichia coli Evans J et al J Bacteriol 96: 1441-1442	69.0 Md
R27	IMG-6437 HI1 Tc Cit ECO K12 J53 Salmonella typhimurium Meynell E & Datta N Genet Res 7:134-140 Taylor DE & Brose EC Appl Environ Microbiol 52:1394-1397	112.0 Md
R40a	IMG-6435 C Ap Hg Km Su ECO K12 J53 Hedges RW et al J Bacteriol 117: 56-62	
R46	IMG-6383 N Ap As Sm Sp Su Tc Uv ECO K12 JC6310:Δlac,his,trp,lys, str-r,recA,T6-r(λ) Salmonella typhimurium Meynell E & Datta N Genet Res 7: 134-140	32 Md
R55-1	IMG-6974 C Cm Hg Su ECO K12 J53-1 Foster TJ & Ginnity F	

	J Bacteriol 162:773-776	
R64 drd11	IMG-6266 I1 Tc Sm drd derivative of R64 Meynell E & Datta N Genet Res 7:134-140	72.0 Md
R68.45	IMG-6665 P Ap Sma Km Tc Pseudomonas aeruginosa PTO 66 R68 derivative with duplication of Haas D & Holloway BW Mol Gen Genet 144:243-251	57.0 Kb IS21
R124	IMG-6436 FIV Tc ECO K12 J53 Salmonella typhimurium Hedges RW & Datta N J Gen Microbiol. 71:403-405	125.7 Kb
R386	IMG-6438 FI Tc ECO K12 J53 Escherichia coli Dennison S J Bacteriol 109:416-422	
R387	IMG-6425 K Cm Sm ECO K12 J53 Shigella flexneri Hedges RW & Datta N Nature 234:220-221	
R388	IMG-6689 W Su Tp ECO K12 J53 Escherichia coli Datta N & Hedges RW J Gen Microbiol 72:349-355 Avilla P & de la Cruz F Plasmid 20:155-157	21 Md
R391	IMG-6440 J Hg Km Nm ECO K12 J53 Proteus rettgeri Foster TJ & Ginnity F J Bacteriol 162: 773-776	
R446b	IMG-6430 M Tc Sm ECO K12 J53 Proteus morgani Hedges RW & Datta N J Gen Microbiol 77: 249-259	47.0 Md
R478	IMG-6439 H12	166.0 Md

	Asa Asi Cm Hg Km Tc Te ECO K12 J53 Serratia marcescens Foster TJ & Ginnity F J Bacteriol 162:773-776				Aeromonas liquefaciens Hedges RW & Datta N Nature 234:220-221	
R621a	IMG-6434 Igamma Tc ECO K12 J53 Salmonella typhimurium Hedges RW & Datta N J Gen Microbiol 77:19-25	65.0 Md		RP1 IMG-6424 P Ap Km Tc ECO K12 J53 Pseudomonas aeruginosa Grinsted et al J Bacteriol 110:529-537	36.0 Md	
R702	IMG-6978 P Hg Km Tc Sm Sp Su ECO K12 J53-1 Proteus mirabilis Foster TJ & Ginnity F J Bacteriol 162:773-776	46.0 Md		RP4-5M IMG-62531 P Km ECO K12 HB101 Derivative of RP4 IMG Collection		
R724	IMG-6975 B Cm Hg Tc Sm Sp Su ECO K12 J53-1 Shigella dysenteriae Datta N & Olarte J AAC 5:310-317 Foster TJ & Ginnity F J Bacteriol 162:773-776	58 Md		RSF1010 IMG-693 Sm Su ECO K12 SEX Guerry P et al J Bacteriol 117: 619-630		
R773	IMG-62713 FI Sm Tc Asa, Asi ECO K12 J53 A transmissible narrow host range plasmid Hedges RW&Baumberg S J Bacteriol 115:459-460 Summers AO& Jacoby GA J Bacteriol 129:276-281			RSF1020 IMG-695 Tc Salmonella panama SP219 Guerry P et al J Bacteriol 117: 619-630		
R828	IMG-6976 H12 Ap Asa Asi Cm Gm Hg Tc Te Km Nm Sm ECO K12 J53-1 Serratia marcescens Foster TJ & Ginnity F J Bacteriol 162:773-776			RSF1030 IMG-696 Ap ECO K12 C600 Heffron F et al J Bacteriol 122:250-256		
R831b	IMG-61069 M Hg Pm ECO K12 J53 Ogawa HI et al Gene 32:311-320			RSF2124 IMG-635 Ap ECO K12 C600 Derivative of ColE1 So M et al Mol Gen Genet 142:239-249		
R931	IMG-6585 P-2 Hg Sm Tc Te Uv ECO K12 P421 Pseudomonas aeruginosa Bryan LE et al Antibiot Agents Chemother 3: 625-637	300.0 Md		Rts1 IMG-6428 T Km Rep (ts) ECO K12 CSH-2: met, pro Proteus vulgaris Coetzee JN et al J Gen Microbiol 72:543-552		
RA1	IMG-6429 C Su Tc ECO K12 J53	86.0 Md		Sa IMG-6433 W Cm Gm Km Tp Sm Sp Su ECO K12 J53 Shigella flexneri Hedges RW & Datta N Nature 234: 220-221	25 Md	
				pACYC184 IMG-6466 Cm Tc ECO K12 C600 rk mk Constructed plasmid. Rep of p15A Chang ACY & Cohen SN J Bacteriol 134:1141-1156	3.9 Kb	
				pAO3 IMG-6230		

	ColE1-r ECO K12 C600 Derivative of ColE1 Oka A et al Mol Gen Genet 172: 151-159				IMG-663 ColV1 Fredericq P Ann Inst Pasteur 84:294-312
pAK1	IMG-61271 Ap Km ECO K12 JM83 Derivative of pUC19 with ori from Ps.sp. KHP41 plasmid Mindlin S et al Genetika (in Russian) 26:1729-1739				pColV2-K94 IMG-654 ColV2 Fredericq P J Theoret Biol 4:159-167
pBR313	IMG-6317 Ap ECO K12 HB101 Constructed plasmid with rep from pMB9 Bolivar F et al Methods Enzymol 68: 245-267				pCR1 IMG-640 Km Derivative of ColE1 Armstrong KA Science 196:172-174
pBR322	IMG-639 Ap Tc ECO K12 HB101 Constructed plasmid with rep of pMB1 Bolivar F et al Gene 2: 95-113	4.3 Kb			pDS2 IMG-61895 Ap pBR322 with Ptac-rpoH gene Grossman AD et al Genes Dev 1:179-184
pBR325	IMG-6204 Ap Cm Tc ECO K12 LE392 Constructed plasmid with rep of pMB1 and Cm gene from P1Cm Bolivar F Gene 4: 121-136	6.0 Kb			pDU202 IMG-6387 FII Cm Hg Sm Su ECO K12 DU1040 Foster et al J Bacteriol 140:167-181
pBRH4	IMG-6213 Ap ECO K12 HB101 Derivative of pBR322 West JRW et al Gene 7: 271-288				pET-3a IMG-6956 Ap ECO K12 HMS174 Translation vector Rosenberg AH Gene 56: 125-135
pColD-CA23	IMG-683 ColD Escherichia coli Fredericq P Ann Inst Pasteur 84: 294-312				pET-5 IMG-6952 Ap ECO K12 HMS174 Translation vector with rep of pBR322 and pfi10 from T7 Rosenberg AH Gene 56: 125-135
pColE1	IMG-657 ColE1 ECO K12 C600 Escherichia coli Clowes RC Genet Res 4: 162-165				pET-7 IMG-6962 ECO B BL21 Transcription vector with pfi10 from T7 Rosenberg AH Gene 56: 125-135
pColG-CA46	IMG-6617 ColG Fredericq P Ann Inst Pasteur 84: 294-312				pGEM-5Zf(-) IMG-62833 Ap ECO K12 pUC-derivative Promega Inc
pColH-CA58	gyrA IMG-6616 ColH Fredericq P Ann Inst Pasteur 84: 294-312				pGEM-7Zf(-) IMG-62834 Ap ECO K12 pUC-derivative Promega Inc
pColV1-CA7					pJC79 IMG-6380 Ap Derivative of pBR322; contains 2 cos I ECO K12 HB101 Hohn B & Collins J

pKC7	Gene 11:291-298 IMG-6499 Ap Km ECO K12 HB101 Derivative of pBR322 Rao RN & Rogers SG Gene 7:79-82		ECO K12 JM83 A recombinant plasmid, contains a portion of Tn5041G. Obtained by cloning 10 kb EcoRI fragment of the strain PSF KHP22 into pUC19. Yurieva O et al Mol Microbiol 24:321-329
pKK3535	IMG-6349 Ap ECO K12 DH1 pBR322 with rrnB operon Brosius J et al Plasmid 6:112-118		pKLH53.1 IMG-62565 Ap Hg ECO K12 JM83 A recombinant plasmid. Obtained by insertion of the DraI-NdeI fragment of RP1 containing Tn5053 into pUC19. Kholodii GYa et al Mol Microbiol 17 :1189-1200
pKLH1	IMG-6943 Hg ACA BD413rif Acinetobacter calcoaceticus KPH18 (Kirgizia, mercury mine). Nonconjugative mobilizable broad host range plasmid, Lomovskaya OL et al Mol Gen Genet 202:286-290	7.5 kb	pKLH97.1 IMG-61435 Ap Hg ECO K12 JM83 A recombinant plasmid, contains a portion of Tn5041D. Obtained by cloning 7.9 kb EcoR1 fragment of the strain PS sp TC97 into pUC19. Yurieva O et al Mol Microbiol 24:321-329
pKLH2	IMG-6951 Hg ACA BD413str Acinetobacter calcoaceticus KPH18 (Kirgizia, mercury mine). Conjugative narrow host range plasmid, contains mer-operon associated with a truncated transposition module. Mindlin SZ et al Genetika 22:2684-2692 (In Russian)) Kholodii GYa et al Plasmid 30:303-308	60 kb	pKLH101.1 IMG-61113 Ap Hg ECO K12 JM83 pUC19 derivative; contains mer-operon of pKLH1 found in the strain ACA KH109 Lomovskaya OL Ph D thesis
pKLH2.5	IMG-61017 Ap, Hg A recombinant plasmid, contains the mer-operon of pKLH2 obtained by cloning EcoRI fragment of pKLH2 into pUC19 Lomovskaya OL & Nikiforov VG Genetika (In Russian),24:1539-1549		pKLH202.3 IMG-61101 Ap Hg ECO K12 JM83 pUC19 derivative; contains mer-operon from pKLH202 found in the strain AC sp.TC108 Lomovskaya OL & Nikiforov VG Genetika (in Russian) 24:1539-1549
pKLH3	IMG-61509 Hg PMA MKD382-2: Hg-s Rif-r Str-r derivative of Exiguobacterium sp TC38-2b. Exiguobacterium sp TC38-2b (Carpathian). Transmissible narrow host range plasmid, Bogdanova ES et al Microbiology 144:609-620		pKLH210.2 IMG-792 Cm Hg ECO K12 XLI-Blue A recombinant plasmid, contains Tn5059 . Obtained by cloning 29 bp BamHI fragment of pKLH210 from the strain ECO CH210 (Chicago, USA) into pACYC184. Yurieva O et al Mol Microbiol 24:321-329
pKLH16.1	IMG-61433 Ap Hg ECO K12 JM83 A recombinant plasmid, contains a portion of Tn5041. Obtained by cloning 8.3 kb EcoRI fragment of the strain PS sp NC16-2 into pUC19. Yurieva O et al Mol Microbiol 24:321-329	11 kb	pKLH256.1 IMG-61350 Cm Hg ECO K12 HB101 A recombinant plasmid, contains Tn5036 . Obtained by cloning BamHI fragment of pKLH256 found in the strain EBC TC256 into pACYC184. Yurieva O et al Mol Microbiol 24:321-329
pKLH22.1	IMG-61434 Ap Hg	12.7 kb	pKLH402.1 IMG-61256 10.2 kb Ap Tp ECO K12 JM83 A recombinant plasmid. Obtained by insertion of the PstI-fragment of R751 carrying Tn402 into pUC19

	Kholodii GYa et al Mol Microbiol 17 :1189-1200		Tc Hg ECO K12 AB1157 A recombinant plasmid. Obtained by insertion of the 11.7 kb fragment of Hg-r plasmid pMER300 into pAT153. Jobling MG et al Plasmid 20:106-11
pKM101	IMG-6137 N Ap mucAB+ ECO PC3: dnaG (ts) leu thy Walker GC Mol Gen Genet 152:93-103	pMJ300	IMG-61881 Tc Hg ECO K12 AB1157 A recombinant plasmid, contains Tn5053v1 Obtained by insertion of the 12.3 kb fragment of pMERO5 into pAT153. Jobling MG et al Plasmid 20:106-112 Hobman J et al Gene 146:73-78
placIq	IMG-61222 Tc ECO K12 AJ6207 pACYC184 with lacIq gene Kashlev M Ph D thesis		
placK	IMG-62501 Km ECO K12 R120K pACYC184 with lacIq and kan genes IMG Collection	pMJ400	IMG-61882 Cm Hg ECO K12 AB1157 A recombinant plasmid. Obtained by insertion of the 10.9 kb fragment of Hg-r plasmid pMER11 into pLV59. Jobling MG et al Plasmid 20:106-112
plysE	IMG-6964 Cm LysE+ ECO B BL21(DE3) Studier FW & Moffat BA J Mol Biol 189:113-130	pMKA1	IMG-61864 Ap pBR322 with rpoB and Plac-rpl genes Kashlev MV et al Genetika (in Russian) 24:1343-1352
plysS	IMG-6963 Cm LysS+ ECO B BL21(DE3) Studier FW & Moffat BA J Mol Biol 189:113-130	pMK47	IMG-61898 Ap pBR322 with gyrB gene Mizuuchi K et al J Biol Chem 259:9199-9201
pMB9	IMG-634 Tc ECO K12 C600 rk mk ColE1-like plasmid Rodriguez R et al Molecular mechanisms in the control of gene expression NY: Acad Press, p 471	pML2	IMG-669 Km ECO K12 C600 ColE1-like plasmid Hershfield V et al Proc Natl Acad Sci 71: 3455-3459 Mol Gen Genet 204:17-23
pMER610	IMG-61239 Hg Te Phi ECO K12 AB1157 Jobling MG & Ritchie DA Mol Gen Genet 208:288-293	pNO2661	IMG-61896h placUVR-rpL and rpoBC genes Bedwell DM, Nomura M Mol Gen Genet 204:17-23
pMG402	IMG-61883 Cm Hg ECO K12 AB1157 A recombinant plasmid. Obtained by insertion of the 7.7 kb HindIII-BglII fragment of pMJ400 into pLV59. Jobling MG et al Plasmid 20:106-112	pOR1453	IMG-6263 Tc ECO K12 KM4104 Recombinant plasmid with recA and srl E genes Weinstock GM et al Proc Nat Acad Sci 76:126-130
pMG501	IMG-61884 Cm Hg ECO K12 AB1157 A recombinant plasmid. Obtained by insertion of the 12.3 kb fragment of IncH1-2 Hg-r plasmid pMER610 (from an Alcaligenes sp.) into pLV59. Jobling MG et al Plasmid 20:106-112	pOX38gen	IMG-62815 F 56 kb Gm ECO K12 RZ211: ara D(lac-pro) rpsL recA56 srl A conjugative plasmid. Constructed by ligation a HindIII fragment from pSK2 into the unique HindIII site of pOX38 Willets N & Johnson D Mol Gen Genet 182:520-522
pMJ200	IMG-61880		

	Guyer M et al Cold Spring Harb Symp Quant Biol 45:135-140		pTZb'	IMG-62502 Ap Km A recombinant pTZ19R plasmid with rpoC gene
pRK2526	IMG-62769 P Ap Km ECO K12 MV10:thr-1 leuB6 lacY1 thi-1 tonA21 supE44 rfbD1 DtrpE5 RK2 derivative. Obtained by insertion of the E.coli lac-operon in the tetA gene of RK2. Sia EA et al J Bacteriol 177:2789-2797		pUC4K	IMG-62716 Ap Km ECO K12 HB101 Derivative of pUC4, contains 1.43 Kb Km-cassette Vieira J & Messing J Gene 19:259-268
pRK21382	IMG-62767 P Ap Km Sp ECO K12 MV10:thr-1 leuB6 lacY1 thi-1 tonA21 supE44 rfbD1 DtrpE5 pRK2526 derivative with deletion of the entire par region. Sia E.A. et al J Bacteriol 177:2789-2797		pUC18	IMG-6446 Ap ECO K12 JM83 Derivative of pBR322 Yanisch-Perron C et al Gene 33:103-119
pRK21522	IMG-62768 P Ap Km Sp ECO K12 MV10:thr-1 leuB6 lacY1 thi-1 tonA21, supE44 rfbD1 DtrpE5 pRK2526 derivative with deletion of the parCBA operon. Sia EA et al J Bacteriol 177:2789-2797		pUC19	IMG-6447 Ap ECO K12 JM83 Derivative of pBR322 Yanisch-Perron C et al Gene 33:103-119
pRK21526*	IMG-62770 P Ap Km Sp ECO K12 MV10:thr-1 leuB6 lacY1 thi-1 tonA21 supE44 rfbD1 DtrpE5 pRK2526 derivative with deletion of the parDE operon. Sia EA et al J Bacteriol 177:2789-2797		pUC1318	IMG-6927 Ap ECO K12 JM83 A hybrid between pUC13 and pUC18 Kay R & McPherson Nucl Acids Res 15:2778
pRL285	IMG-61894 Ap A recombinant pUC-plasmid, contains rpoB gene		pUC1813	IMG-6936 Ap ECO K12 JM83 A hybrid between pUC18 and pUC13 Kay R & McPherson Nucl Acids Res 15:2778
pRP1.2	IMG-6960 P Tc ECO K12 AB1456 Derivative of RP1 Danilevich VN et al Genetika (in Russian) 16:1958-1966		pVH51	IMG-690 ColE1-r ECO K12 C600 Derivative of ColE1 Hershfield V et al J Bacteriol 126: 447-453
pSC101	IMG-668 Tc ECO K12 111 Constructed plasmid Cohen SN & Chang ACY J Bacteriol 132:734-737	9.0 Kb	pWR2	IMG-61029 Ap ECO K12 CAG1574:araD139 D(ara-leu)7697 D lacX174 galU galK hsdR strA recA56 srl pMLB1109 with mer R gene and a part of merT gene from Tn21 Ross W et al J Bacteriol 171:4009-4018
pSM1	IMG-6973 C Ap Cm Hg Km Pm Su Tc Tp ECO K12 J53-1 Foster TJ & Ginnity F J Bacteriol 162:773-776		pWWO	IMG-62783 TOL PSP KT2442(rif-r) PSP mt-2. A transmissible broad host range plasmid, contains Tn4651 and Tn4653 Tsuda M and Iino T Mol Gen Genet 213:72-77 Tsuda M et al J Bacteriol 171:1386-1393
			pYW22	IMG-61818 Tc

ECO K12 JM83
 pSC101 with 2.8 fragment from R100
 Wang Y et al
 J Bacteriol 169:4848-4851

pYW40

IMG-61886
 Ap Tc Hg
 ECO K12 JM83(pYW22)
 A recombinant plasmid, contains mercury resistance genes from a *Bacillus cereus* RC607. Obtained by cloning of the 6.2 kb fragment of RC607 into pUC9
 Wang Y et al
 J Bacteriol 169:4848-4851
 Bogdanova ES et al
 Microbiology 144:609-620

Transposons

Key:

- 1 Transposon name
- 2 Origin
- 3 Molecular weight
- 4 Phenotype
- 5/6 IMG Accession number
- 5 Host strain and recombinant plasmid containing transposon
- 6 Host strain and :: transposon in chromosome
- 7 Reference(s)

Tn1	RP1 5.0 kb Ap IMG-7163 ECO K12 JM83 pACYC184Tc::Tn1 Berg CM & Berg DE in Microbiology-1981 Ed Schlessinger D Washington 1981
Tn9	P1Cm 2.6 kb Cm IMG-61084 ECO K12 CH111 RP1-Rep::Tn9 Callas MP & Miller JH Cell 20:579-595
Tn21	NR2(R100) from <i>Shigella flexneri</i> 19.7 kb Hg Su Sm IMG-61086 ECO K12 UB5201 pUB837 (pBR322::Tn21) de la Cruz F & Grinsted J J Bacteriol 151:222-228 Liebert et al Microbiol&Mol Biol Rev 63:507-522
Tn501	pVS1 8.2 kb Hg IMG-61092 ECO K12 UB5201 pUS982 (pBR322::Tn501) IMG-61067 R388::Tn501 Bennet et al Mol Gen Genet 159:101-106
Tn701	R446b 8.5 kb Tc IMG-62721 ECO K12 HB101 pUC19::Tn701 IMG-62725 ECO K12 MKD135 pOX38gen::Tn701 Minakhina SV et al Mol Microbiol 33:1059-1068
Tn1721	pRSD1 11.4 kb Tc IMG-61087 ECO K12 UB5201 pJOE105 (pBR322D:1721) Schmitt R et al Mol Gen Genet 172:53-65
Tn3401	

Tn5036v1	Hg IMG-6979 ECO K12 J53-1 R388::Tn3401 Foster TJ & Ginnity F J Bacteriol 162:773-776	Tn5046	PS sp LS46-6 (Russia, Saratov) 10118 bp Hg IMG-788 ECO K12 H101 pRP146 (RP1::Tn5046) IMG Collection
	Aeromonas sp.HU1-5 (New York, river Hudson) 7.8 kb Hg IMG-786 ECO K12 AB1456 pRP138(RP1::Tn5036) IMG Collection	Tn5050	PS sp LS45-3 (Saratov, Russia) 8 kb Hg IMG-61538 ECO K12 AB1456 pRP150 (RP1::Tn5050) IMG Collection
Tn5039	Unidentified Gram negative strain BW8 (USA, Bethesda, water) 20 kb Hg IMG-61505 ECO K12 HB101 pRP139 (RP1::Tn5039) IMG Collection	Tn5051	PSP HU1-6 12 kb Hg IMG-61465 ECO K12 JM83 pRP151 (RP1::Tn5051) IMG Collection
Tn5041	PS sp KHP41 (Kirgizia) 14876 bp Hg IMG-61423 ECO K12 HB101 pRP141 (RP1::Tn5041) Kholodii GYa et al Microbiology 143:2549-2556	Tn5053	XH sp KHW17 (Kirgizia, mercury mine) 8447 bp Hg IMG-61475 ECO K12 JM83 pRP153 (RP1::Tn5053) IMG-2426 ECO K12 IF238 MKD1215::Tn5053 Insertion into position 1390675 (AE000231) Kholodii GYa et al Mol Biol 230:1103-1107 Kholodii GYa et al Mol Microbiol 17 :1189-1200
Tn5041B	PSF TC29-5 (Carpathian) 14.8 kb Hg IMG-7128 ECO K12 JF238 pRP1.241B (pRP1.2::Tn5041B) Kholodii GYa et al Genetika (in Russian) 36:459-469	Tn5054	Unidentified Gram-negative strain MU5-4 (USA, East Lansing, water) 8,4 kb Hg IMG-61539 ECO K12 AB1456 pRP154 (RP1::Tn5054) IMG Collection
Tn5041C	PS sp TC29-1 (Carpathian) 17 kb Hg IMG-7127 ECO K12 JF238 pRP141C (RP1::Tn5041C) Kholodii G Ya et al Genetika (in Russian) 36:459-469	Tn5055	Enterobacter sp. CH2-4 (USA, Chicago) 8.4 kb Hg IMG-61506 ECO K12 HB101 pRP155 (RP1::Tn5055) IMG Collection
Tn5041D	PS sp MU10-2 (East Lansing, USA) 21.5 kb Hg IMG-7112 ECO K12 HB101 pRP141D (RP1::Tn5041D) Kholodii G Ya et al Genetika (in Russian) 36:459-469	Tn5056	Unidentified Gram-negative strain LS32-1 (Moscow district, water) 13.7 kb Hg PM IMG-795 ECO K12 HB101 pRP156 (RP1::Tn5056) IMG Collection
Tn5042	PSF ED94-63 (Russia, Kolyma) 7 kb Hg PM IMG-7118 ECO K12 AB1456 pRP1.242 (pRP1.2::Tn5042) IMG Collection	Tn5057	ECO CH210 (chromosome) (USA, Chicago) 8.5 kb Hg IMG-791 ECO K12 JM83 cloned into pUC19 IMG Collection
Tn5044	XHC TAP44-3 (Russia, Kamchatka) 10840 bp Hg (Ts) IMG-61353 ECO K12 AB1456 pRP144 (RP1::Tn5044) IMG-7176 ECO K12 HB101 pACYC184Tc::Tn5044 Minakhina SV et al Mol Microbiol 33:1059-1068	Tn5058	PS sp. ED23-33 (Russia, Kolyma) 12.3 kb Hg PM IMG-782 ECO K12 AB1456 pRP158 (RP1::Tn5058)

IMG-2427 ECO K12 IF238
 IF238-571::Tn5058
 IMG Collection

Tn5060
 PS sp A19-1 (Russia, Kolyma)
 8.7 kb
 Hg
 IMG-7133 ECO K12 IF238
 pRP160 (RP1::Tn5060)
 IMG-7174 ECO K12 HB101
 pACYC184::Tn5060
 IMG-7183 ECO K12 HB101
 pBR322::Tn5060
 IMG Collection

Tn5061
 P.alcaligenes FA8-1 (Russia,
 Kamchatka)
 Hg
 IMG-7101 ECO K12 AB1456
 pRP161 (RP1::Tn5061)
 IMG Collection

Tn5062
 Unidentified Gram-negative strain
 MU5-25 (USA, East Lansing, water)
 Hg
 IMG-61540 ECO K12 AB1456
 pRP162 (RP1::Tn5062)
 IMG Collection

Tn5070
 Unidentified Gram-negative strain
 BW-13 (USA, Bethesda, water)
 6692 bp
 Hg
 IMG-61468 ECO K12 JM83
 pRP170 (RP1::Tn5070)
 IMG-7184 ECO K12 HB101
 pKLH70.1 (pBR322::Tn5070)
 IMG-7175 ECO K12 HB101
 pACYC184::Tn5070
 IMG Collection

Tn5071
 Unidentified Gram-negative strain
 HU2-1 (USA, New York, water)
 >25 kb
 Hg
 IMG-61466 ECO K12 JM83
 pRP171 (RP1::Tn5071)
 IMG Collection

Tn5072
 Unidentified Gram-negative strain
 TC33-5 (Carpathian, mercury mine)
 Hg
 IMG-7104 ECO K12 JF238
 pRP172 (RP1::Tn5072)
 IMG Collection

Escherichia Coli Host Strains

(suitable for use as plasmid recipients)

E.coli K12

AB1157: lac thr leu thi pro his arg str
 AB1456: argH metB his ilv str rif
 C600: thi-1 thr-1 leuB6 lacY1 tonA21 supE44
 C600 rk mk: C600 HsdR- HsdM-
 CH111: ade argH lac gal xyl thi-1 trpA36 recA tonA strA
 DH1: thi-1 gyrA96 hsdR17 supE44 endA relA1 recA1
 HB101: thi pro leu hsdR hsdM recA56 str
 HMS174: hsdR recA rif-r
 J53: met pro
 J53-1: met pro nal-r
 JF238: prototrophic nal-r
 JM83: ara D(lac- pro) rpsL f80DlacZDM15
 LE392: metB1 lacY1 galK2 trpR55 supE44 supF58 hsdR514
 MKD135: argH rif-r recA
 UB5201: met pro recA56 gyrA
 XXLI-Blue: thi lac supE44 relA1 gyrA96 endA1 recA1 hsdR17
 (F'proAB+ lacIq D(lacZ)M15 Tn10)

E.coli B host strains

BL21: gal hsdS
 BL21(DE3): gal hsdS (λ cl857 ind-1 Sam7 nin5 lacUV5-T7 gene)

Abbreviations

Plasmids & Transposons

Property	Description
Asa	Arsenate resistance
Asi	Arsenite resistance
Ap	Ampicillin resistance
Cm	Chloramphenicol resistance
Gm	Gentamicin resistance
Hg	HgCl ₂ resistance
Km	Kanamycin resistance
PM	Phenyl mercuric acetate resistance
Sm	Streptomycin resistance
Sp	Spectinomycin resistance
Su	Sulphamide resistance
Tc	Tetracycline resistance
TOL	Toluene degradation

Codes for the names of the bacterial species

CODE	NAME
ACA	Acinetobacter calcoaceticus
ECO	Escherichia coli
EBC	Enterobacter cloacae
PSF	Pseudomonas fluorescens
PSP	Pseudomonas putida
PS sp	Pseudomonas sp.
XHC	Xanthomonas campestris
XH sp	Xanthomonas sp.