

Table S1. *Mod* alleles and repeat numbers for *N. meningitidis* isolate strains

Strain	ST	<i>modA</i> allele ^d	Repeats AGCC ^b	ON/OFF ^b	<i>modB</i> allele ^d	Repeats CCCAA ^{b,c}	ON/OFF ^b
MC58 ^a	32	<i>modA11</i> ^h	20	OFF	<i>modB1</i> ^g	16	OFF
Z2491 ^a	4	<i>modA12</i>	3	OFF	<i>modB2</i>	8	OFF
153	5	<i>modA12</i>	4	ON	ND		
F6124	5	<i>modA12</i>	23	OFF	ND		
44/76	32	<i>modA11</i>	18	OFF	<i>modB1</i> ^g	ND	
14/1455	5	<i>modA12</i>	4	ON	<i>modB2</i>	11	OFF
F4698	5	<i>modA12</i>	3	OFF	<i>modB2</i>	13	OFF
3906	17	<i>ModA12</i>	3	OFF	ND		
NG PB24	32	<i>modA11</i> ^h	29	OFF	<i>modB1</i>	10	OFF
BZ 169	32	<i>modA11</i> ^h	23	OFF	<i>modB1</i> ^g	10	OFF
500	11	<i>modA12</i>	3	OFF	ND		
BZ 10	8	<i>modA11</i>	8 AGTC	-	ND		
BZ198	41	<i>modA12</i>	3	OFF	<i>modB2</i>	5	OFF
NG P20	11	<i>modA12</i>	3	OFF	<i>modB2</i>	7	
297-0	49	<i>modA15</i> ^e	27	OFF	<i>modB2</i>	9 TCCAA	ON
1000	20	<i>modA12</i>	3	OFF	ND		
8680	32	<i>modA15</i> ^e	27	OFF	ND		
AK50	41	<i>modA12</i>	10	ON	ND		
860060	24	<i>modA12</i>	3	OFF	ND		
B6116/77	10	<i>modA12</i>	24	OFF	ND		
M40/94	41	<i>modA12</i>	10	ON	<i>modB2</i>	17 GCCAA	OFF
M-101/93	41	<i>modA12</i>	13	ON	<i>modB2</i>	6 GCCAA/CCCAA	ON
312 901	8	<i>modA12</i>	10	ON	ND		
890326	28	<i>modA12</i>	7	ON	ND		
88/03415	46	<i>modA12</i>	16	ON	<i>modB2</i>	9	ON
G2136	8	<i>modA12</i>	19	ON	ND		
SB25	8	<i>modA12</i>	15	OFF	<i>modB2</i>	8	OFF
2059001	4	<i>modA12</i>	3	OFF	ND		
A22	22	<i>modA12</i>	3	OFF	<i>modB2</i>	13	OFF
E26	39	<i>modA12</i>	11	OFF	ND		
N45/96	41	<i>modA11</i>	32	OFF	ND		
E32	29	<i>modA12</i>	24	OFF	ND		
204/92	31	<i>modA11</i>	27	OFF	ND		
94/155	23	<i>modA12</i>	10	ON	ND		
50/94	33	<i>modA12</i>	16	ON	ND		
400	66	<i>modA12</i>	15	OFF	<i>modB2</i>	6 GCCAA	ON
931905	45	<i>modA12</i>	23	OFF	ND		
91/40	40	<i>modA12</i>	22	ON	ND		
AK22	41	<i>modA12</i>	10	ON	<i>modB2</i>	16 GCCAA	OFF
L93/4286	42	<i>modA12</i>	15	OFF	ND		
7891	8	<i>modA12</i>	3	OFF	<i>modB2</i>	10	OFF
D8	11	<i>modA12</i>	3	OFF	<i>modB2</i>	8	OFF
C751	5	<i>modA12</i>	3	OFF	ND		

26	12	<i>modA12</i>	3	OFF	ND		
S5611	4	<i>modA12</i>	3	OFF	ND		
154	4	<i>modA12</i>	3	OFF	<i>modB2</i>	9	ON
20	4	<i>modA12</i>	3	OFF	<i>modB2</i>	9	ON
CN100	1	<i>modA12</i>	3	OFF	<i>modB2</i>	3	ON
371	6	<i>modA12</i>	3	OFF	ND		
DK 353	1	<i>modA11</i>	16	ON	<i>modB1</i>	10	OFF
NG 6/88	21	<i>modA11</i>	29	OFF	ND		
EG 328	1	<i>modA12</i>	29	OFF	ND		
NG G40	37	<i>modA11</i>	16	ON	<i>modB1</i>	9 GCCAA	
BZ 147	13	<i>modA12</i>	7	ON	<i>modB1</i>	4	OFF
528	18	<i>modA12</i>	9	OFF	ND		
EG 011	25	<i>modA11</i>	11	OFF	ND		
79126	48	<i>modA12</i>	3	OFF	ND		
NG 080	18	<i>modA11^h</i>	24	OFF	<i>modB1^g</i>	ND	
243	36	<i>modA12</i>	3	OFF	ND		
MA-5756	3	<i>modA12</i>	11	OFF	ND		
M597	32	<i>modA12</i>	19	ON	ND		
BRAZ10	4	<i>modA12</i>	3	OFF	<i>modB2</i>	7	OFF
92001	11	<i>modA12</i>	10	ON	<i>modB2</i>	8	
6748	11	<i>modA12</i>	2	OFF	<i>modB2</i>	3	
D1	11	<i>modA12</i>	19	ON	ND		
90/18311	7	<i>modA12</i>	11	OFF	ND		
BZ 163	1	<i>modA12</i>	22	ON	<i>modB2</i>	ND	
NG H41	11	<i>modA12</i>	12	OFF	<i>modB2</i>	16	OFF
NG F26	11	<i>modA11</i>	17	OFF	<i>modB1</i>	9	ON
NG E28	9	<i>modA18^f</i>	18	OFF	ND		
80049	27	<i>modA12</i>	24	OFF	<i>modB2</i>	7	OFF
NG H36	14	<i>modA12</i>	23	OFF	<i>modB1</i>	ND	
139M	26	<i>modA12</i>	3	OFF	<i>modB2</i>	4	OFF
H1964	5	<i>modA12</i>	3	OFF	ND		
SWZ107	47	<i>modA11</i>	11	OFF	<i>modB1</i>	11	OFF
EG 327	1	<i>modA12</i>	12	OFF	<i>modB1</i>	38 GCCAA	OFF
NG H15	5	<i>modA12</i>	26	OFF	<i>modB2</i>	8	OFF
79128	35	<i>modA12</i>	3	OFF	ND		
BZ 232	19	<i>ModA4^e</i>	15	OFF	<i>modB1</i>	6 GCCAA	ON
DK 24	43	<i>modA12</i>	11	OFF	ND		
A4/M1027	3	<i>modA12</i>	3	OFF	ND		
NG E30	38	<i>modA12</i>	20	OFF	<i>modB1</i>	7 GCCAA	OFF
690	16	<i>modA12</i>	4	ON	ND		
S4355	4	<i>modA12</i>	3	OFF	<i>modB2</i>	10	OFF
38VI	44	<i>modA12</i>	3	OFF	ND		
106	4	<i>modA12</i>	3	OFF	<i>modB2</i>	3	OFF
196/87	5	<i>modA11</i>	24	OFF	ND		
322/85	11	<i>modA12</i>	3	OFF	ND		
255	1	<i>modA12</i>	3	OFF	ND		

254	32	<i>modA12</i>	3	OFF	<i>modB2</i>	8	OFF
S3131	2	<i>modA12</i>	3	OFF	ND		
NG E31	4	<i>modA12</i>	3	OFF	ND		
NG 4/88	1	<i>modA12</i>	24	OFF	<i>modB2</i>	6	ON
IAL2229	4	<i>modA12</i>	3	OFF	ND		
NG H38	15	<i>modA11</i>	11	OFF	<i>modB2</i>	17 GCCAA	OFF
EG 329	30	<i>modA11^h</i>	26	OFF	<i>modB1^g</i>	ND	
NG144/82	5	<i>modA11^h</i>	18	OFF	<i>modB1^g</i>	ND	
BZ 83	36	<i>modA11^h</i>	18	OFF	<i>modB1</i>	4	OFF
1014	32	<i>modA12</i>	3	OFF	ND		
120M	32	<i>modA12</i>	3	OFF	ND		
393	34	<i>modA12</i>	3	OFF	ND		
BZ 133	4	<i>modA12</i>	3	OFF	<i>modB1</i>	3	OFF
10	1	<i>modA12</i>	3	OFF	ND		
11-004	1	<i>modA12</i>	3	OFF	ND		
F1576	1	<i>modA12</i>	3	OFF	ND		
129E	4	<i>modA12</i>	3	OFF	ND		
NG 3/88	12	<i>modA12</i>	14	OFF	<i>modB1^g</i>	4	OFF

^a Genome strains

^b Number and expression state of repeats within the *ModA11* or *ModB1* gene; in-frame (ON) or out-of-frame (OFF)

^c Repeats can be either CCCAA, GCCAA or TCCAA

^d A strain was defined as having the *modA11* allele if the DNA recognition region was $\geq 95\%$ identical at the nucleotide level to *modA11* gene of *N. meningitidis* strain MC58 (NMB1375; see Figure 1). A strain was defined as having the *modB2* allele if the DNA recognition region was $\geq 95\%$ identical at the nucleotide level to *modB2* gene of *N. meningitidis* strain Z2491 (NMA1467; see Figure 1)

^e Strain defined as having *modA4* or *modA15* allele as defined in Fox *et al.* 2007 [17]

^f Strain has a new allele henceforth defined as *modA18* in this paper. Shares similarity to *H. influenzae* strain 2019

^g *modB1* strains that contain a premature stop codon

^h Frame shift mutation in *res* at nucleotide 2093

ND: not determined

Refer to Figure 1 and to the text.