

**TABLE S6.** Summary of the sensitivity of various restriction endonucleases to DNA modifications introduced by the JCM7686\_0772 and JCM7686\_2655 proteins (m<sup>5</sup>C MTases).

REase	Recognition site	Sensitivity to m <sup>5</sup> C	Number of sites in pET28_JCM7686_0772	Number of sites in pET28_JCM7686_2655	Cleavage
<b>AluI</b>	AGCT	S	29	29	P, L
<b>BglI</b>	GCcNNNNNGGC	S	3	3	P, L
<b>Bme1390I</b>	CCNGG	U	32	31	P
<b>BsuRI</b>	GGCC	S	51	52	P, L
<b>CaiI</b>	CAGNNNCTG	S	4	4	P, L
<b>EcoO109I</b>	RGGNCCY	S	4	5	P
<b>EcoRII</b>	CCWGG	S	12	12	P, L
<b>Hin6I</b>	GCGC	S	84	91	P
<b>HpaII</b>	CCGG	S	43	44	P
<b>HpyF10VI</b>	GCNNNNNNNGC	S	80	80	P
<b>MspI</b>	CcGG	S	43	44	P
<b>NciI</b>	CCSGG	S	20	19	P, L
<b>Paul</b>	GCGCGC	U	8	10	P
<b>PvuII</b>	CAGCTG	S	4	6	P, L
<b>TaiI</b>	ACGT	S	16	17	P
<b>XhoI</b>	CTCGAG	U	3	2	P, L
<b>Bsh1236I</b>	CGCG	S	75	72	Y
<b>Bsp68I</b>	TCGCGA	U	3	3	Y
<b>Bsp143I</b>	GATC	S	40	43	Y
<b>BspLI</b>	GGNNCC	S	31	32	Y
<b>Eco130I</b>	CCWWGG	U	6	6	Y
<b>FspBI</b>	CTAG	U	7	7	Y
<b>Hin1II</b>	CATG	U	41	41	Y
<b>Hinfl</b>	GANTC	S	20	21	Y
<b>MbiI</b>	CCGCTC	S	7	6	Y
<b>MluI</b>	ACGCGT	S	1	1	Y
<b>NcoI</b>	CCATGG	S	3	2	Y
<b>PamDI</b>	CCATGG	S	3	2	Y

Y – complete cleavage; P – partial digestion; L – partial plasmid cleavage; S – sensitive to m<sup>5</sup>C; U – unknown sensitivity to m<sup>5</sup>C; **C** – the enzyme will not cleave if the **marked** cytosine is methylated; c – the enzyme is not sensitive to methylation of the marked cytosine; C – there are no data on the sensitivity of the enzyme to methylation of the unmarked cytosine.