

**Inhibitory effect of surface pre-reacted glass-ionomer (S-PRG) eluate against
adhesion and colonization by *Streptococcus mutans***

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Supplementary Table 1. List of upregulated genes of MT8148 in the presence of S-PRG eluate, which were observed in both MT8148 and UA159 under two different conditions using DNA microarray analysis.

gene	accession number	S-PRG 0%	S-PRG 6.3%			S-PRG12.5%			S-PRG 25.0%		
		signal	signal	Log2*	change [#]	signal	Log2*	change [#]	signal	Log2*	change [#]
<i>citZ</i>	721099.1	2011.8	9341.3	2.22	4.649	10155.8	2.34	5.052	11623.9	2.53	5.784
<i>ylxM</i>	721453.1	256.0	466.9	0.89	1.851	848.2	1.75	3.359	961.5	1.93	3.809

*Log2 means Log2 ratio. [#]Change means Fold change. The Log2 ratio and Fold change were calculated by signal with each concentration of S-PRG eluate/ signal without S-PRG eluate.

Supplementary Table 2. List of upregulated genes of UA159 in the presence of S-PRG eluate, which were observed in both MT8148 and UA159 under two different conditions using DNA microarray analysis.

gene	accession number	S-PRG 0%	S-PRG 6.3%			S-PRG12.5%			S-PRG 25.0%		
		signal	signal	Log2*	change [#]	signal	Log2*	change [#]	signal	Log2*	change [#]
<i>citZ</i>	721099.1	2981.0	3850.2	0.37	1.292	7838.3	1.40	2.630	7871.8	1.40	2.642
<i>ylxM</i>	721453.1	323.5	563.3	0.80	1.735	652.0	1.01	2.016	1073.9	1.73	3.322

*Log2 means Log2 ratio. [#]Change means Fold change. The Log2 ratio and Fold change were calculated by signal with each concentration of S-PRG eluate/ signal without S-PRG eluate.

Supplementary Table 3. List of upregulated genes of MT8148 in the presence of S-PRG eluate, which were observed in either MT8148 or UA159 under three different conditions using DNA microarray analysis.

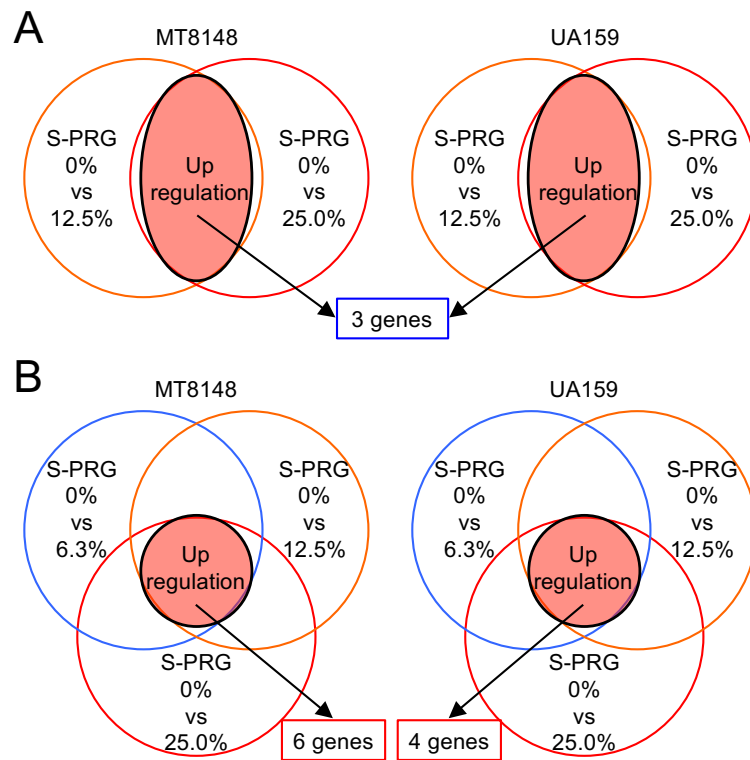
gene	accession number	S-PRG 0%	S-PRG 6.3%			S-PRG12.5%			S-PRG 25.0%		
		signal	signal	Log2*	change [#]	signal	Log2*	change [#]	signal	Log2*	change [#]
<i>citZ</i>	721099.1	2011.8	9341.3	2.22	4.649	10155.8	2.34	5.052	11623.9	2.53	5.784
<i>glnA</i>	720816.1	3913.3	8827.4	1.18	2.258	10800.8	1.47	2.764	10028.9	1.36	2.566
<i>idh</i>	721100.1	1161.3	3778.6	1.70	3.252	4400.5	1.92	3.791	2413.4	1.06	2.079
<i>ilvH</i>	720697.1	2135.5	2568.7	0.27	1.204	3170.3	0.57	1.486	11440.8	2.42	5.364
<i>purD</i>	720531.1	1873.4	2540.2	0.44	1.359	4315.1	1.21	2.309	2061.7	0.14	1.102
<i>purK</i>	720534.1	5543.8	9380.9	0.76	1.693	16232.1	1.55	2.929	7709.8	0.48	1.391

*Log2 means Log2 ratio. [#]Change means Fold change. The Log2 ratio and Fold change were calculated by signal with each concentration of S-PRG eluate/ signal without S-PRG eluate.

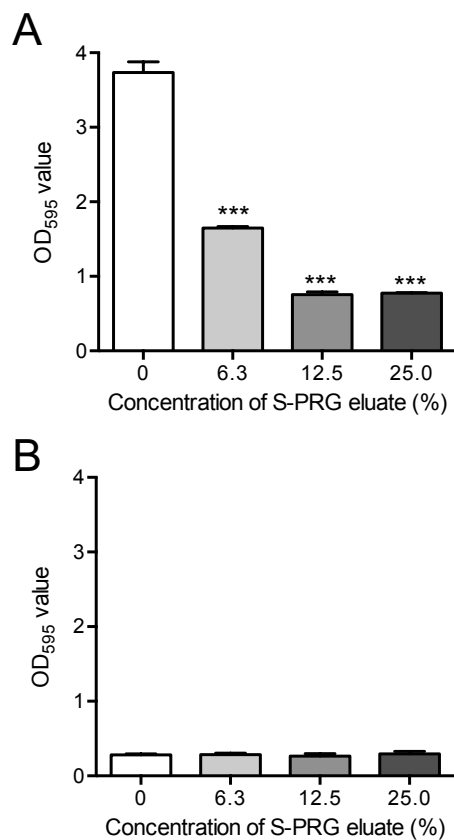
Supplementary Table 4. List of upregulated genes of UA159 in the presence of S-PRG eluate, which were observed in either MT8148 or UA159 under three different conditions using DNA microarray analysis.

gene	accession number	S-PRG 0%	S-PRG 6.3%			S-PRG12.5%			S-PRG 25.0%		
		signal	signal	Log2*	change [#]	signal	Log2*	change [#]	signal	Log2*	change [#]
<i>citZ</i>	721099.1	2981.0	3850.2	0.37	1.292	7838.3	1.40	2.630	7871.8	1.40	2.642
<i>glnA</i>	720816.1	4433.9	4162.9	-0.09	0.939	15224.5	1.78	3.437	4554.6	0.04	1.027
<i>idh</i>	721100.1	1210.9	1786.2	0.56	1.475	2576.9	1.09	2.128	1676.8	0.47	1.385
<i>ilvH</i>	720697.1	4203.5	9367.9	1.16	2.231	8865.0	1.08	2.112	9574.6	1.19	2.280
<i>purD</i>	720531.1	955.3	2130.0	1.16	2.231	3688.3	1.95	3.863	2024.7	1.08	2.120
<i>purK</i>	720534.1	2146.5	4975.6	1.21	2.319	8335.2	1.96	3.886	5267.3	1.30	2.455

*Log2 means Log2 ratio. [#]Change means Fold change. The Log2 ratio and Fold change were calculated by signal with each concentration of S-PRG eluate/ signal without S-PRG eluate.



Supplemental Figure 1. Selection of altered genes in the presence of S-PRG eluate using DNA microarray analysis. (A) Altered expression of key genes in both *S. mutans* MT8148 and UA159 under two different conditions. (B) Altered expression of key genes in either *S. mutans* MT8148 or UA159 under three different conditions.



Supplemental Figure 2. Quantitation of biofilm formation by *S. mutans* MT8148 in the presence of various concentrations of S-PRG eluate with or without 1% sucrose. Biofilm formation by cells grown in BHI in the presence of 1% sucrose (A) and without sucrose (B).