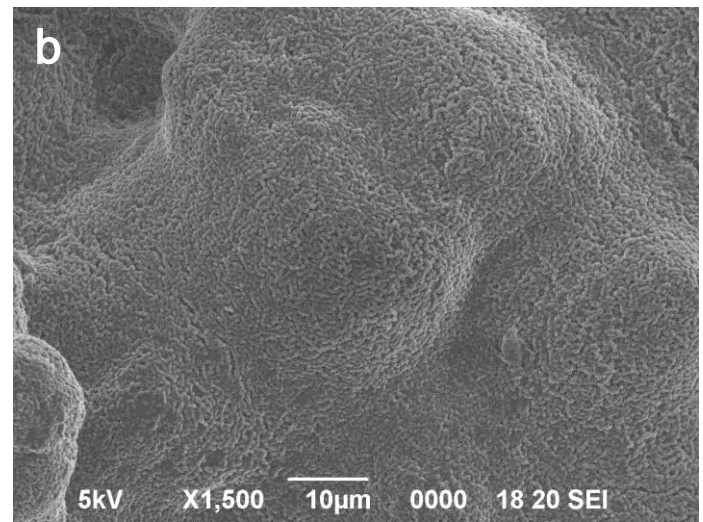
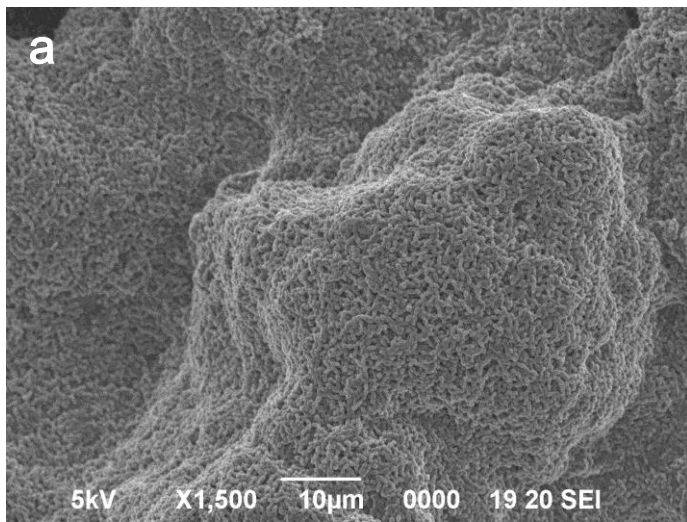
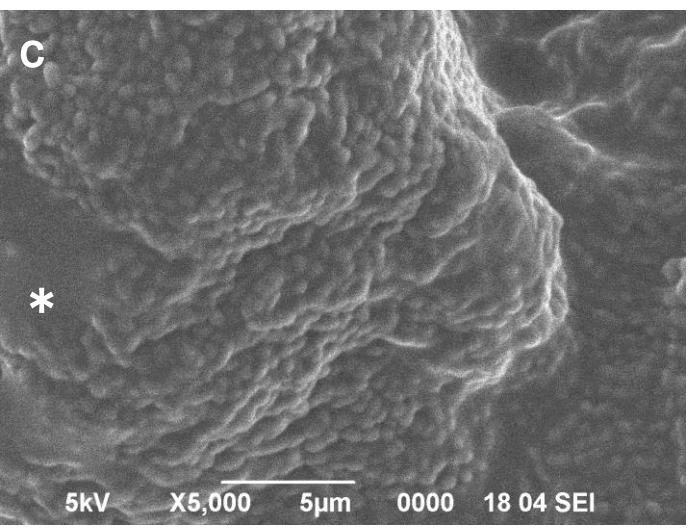
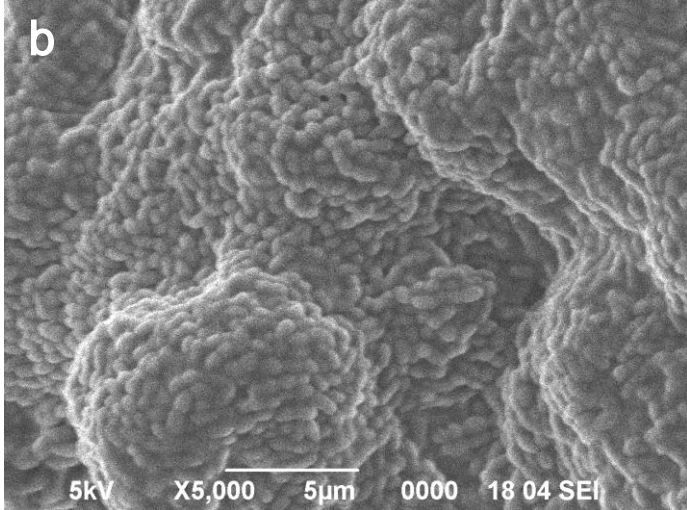
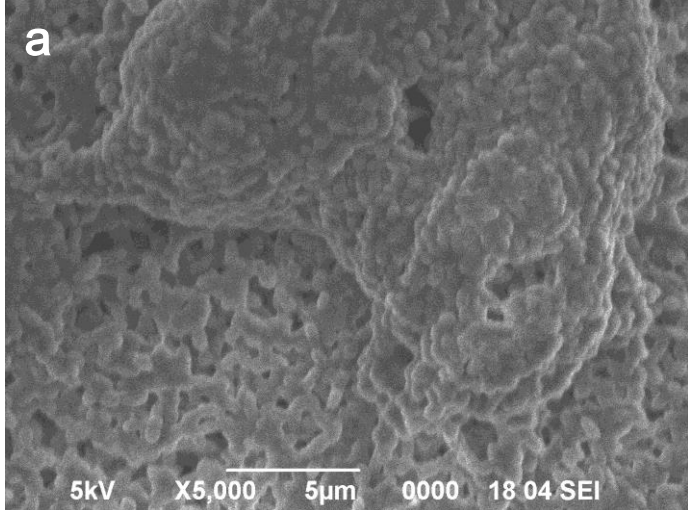


**Figure S1** High-magnification images of *S. mutans* biofilm using IL.

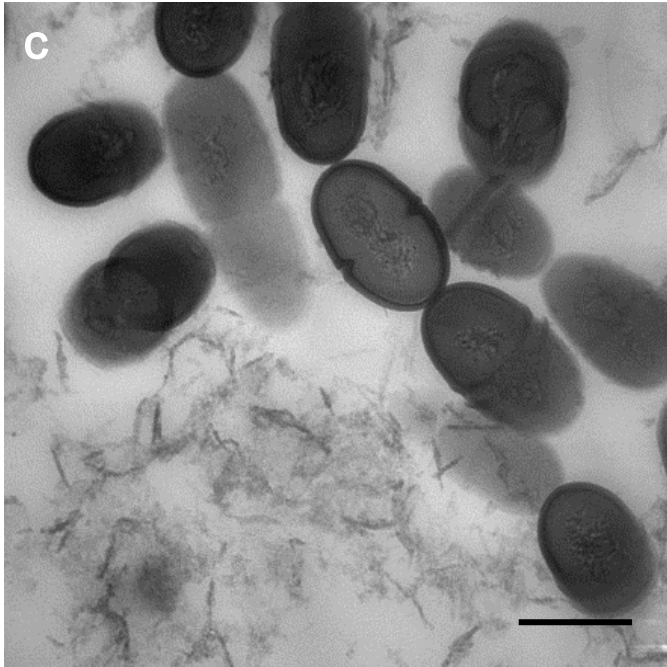
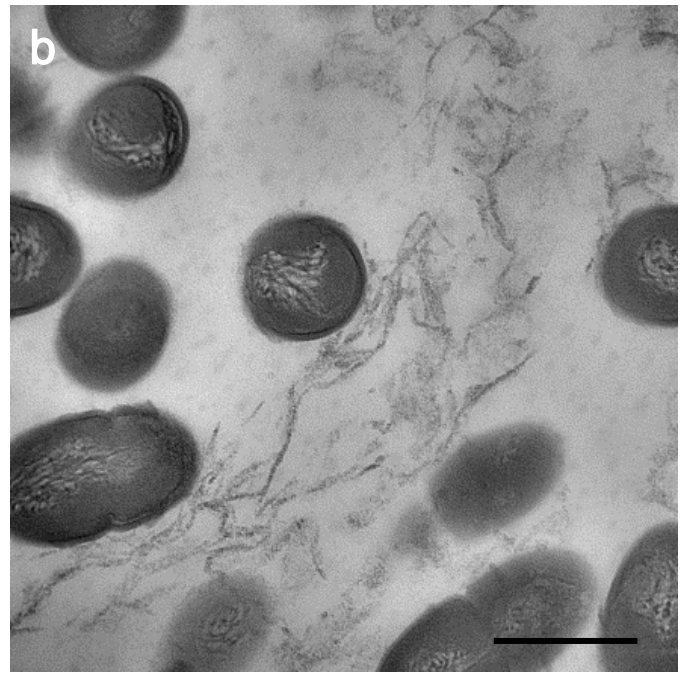
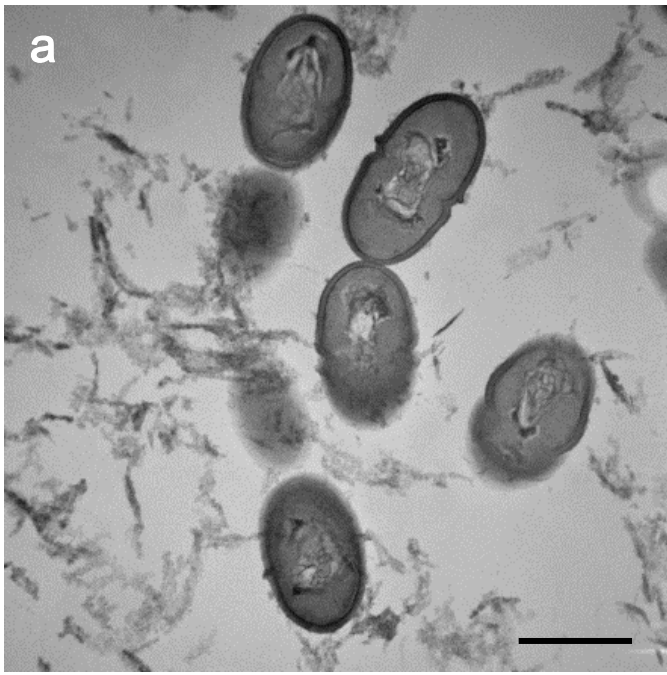
(a): control using conventional method at  $\times 10,000$ , (b): 1% [Ch][Lac], (c): 10% [C<sub>2</sub>mim][AcO] at  $\times 10,000$  and (d): 10% [Ch][Lac] at  $\times 15,000$ . Clear images were obtained at high magnifications. Bars = 1  $\mu\text{m}$ . Arrows indicate the fibriform extracellular matrix like structure.



**Figure S2** SEM images of *S. mutans* biofilms using glutaraldehyde and IL. SEM images of *S. mutans* biofilms pretreated with glutaraldehyde and 10% [Ch][Lac] (a) and with 10% [Ch][Lac] (control) (b). There were no differences on SEM images between glutaraldehyde-treated biofilm and control. Bars = 10  $\mu$ m.



**Figure S3** SEM images of *S. mutans* biofilm using IL of various concentrations. [C<sub>2</sub>mim][AcO] was used at (a): 1%, (b): 10% and (c):20%. Asterisk indicates the accumulated IL. Bars = 5 μm.



**Figure S4** High-magnification images of *S. mutans* biofilm by TEM.

(a): control, (b): 10% [Ch][Lac] and (c): 10% [C<sub>2</sub>mim][AcO]. Compared with the control biofilm, there was no difference in the images of the bacterial cell membrane, cell wall and cytoplasm for the IL-treated biofilm. Bars = 500 nm.