**Physical characteristics and cell-adhesive property of *in* *vivo* fabricated hyaluronan / bacterial cellulose nanocomposites**

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**Supporting information**



**Fig. S1.** (a) FT-IR difference spectra of the residues obtained after enzymatic degradation of pellicles by cellulase ONOZUKA R-10. (b, c) Illustration of the procedure (b) and the result (c) of negative control experiment, which assess the effect of cellulase treatment on ELISA-like HA assay and



**Fig. S2.** The thicknesses of pellicles measured by CLSM. The values were compared statistically between groups using Tukey-Kramer test, with *p* < 0.05 considered as statistically significant (\*).



**Fig. S3**. Results of dynamic mechanical analysis in multiple frequency (10, 1, and 0.1 Hz). All measurements were conducted under water at 37˚C. The values were compared statistically between groups using Tukey-Kramer test, with *p* < 0.05 considered as statistically significant (\*).



**Fig. S4.** (a) The projected areas of the individual normal human epidermal keratinocytes (NHEK) grown on the pellicle substrates. The values at culture periods of 48 h and 96 h were measured by CLSM. The values in each culture periods were compared statistically between groups using Tukey-Kramer test, with *p* < 0.05 considered as statistically significant (\*). (c) FE-SEM images of NHEKs grown on the pellicle substrates.