

Supporting Information

Enhanced ROS scavenging and tissue adhesive abilities in injectable hydrogels by protein modification with oligoethyleneimine

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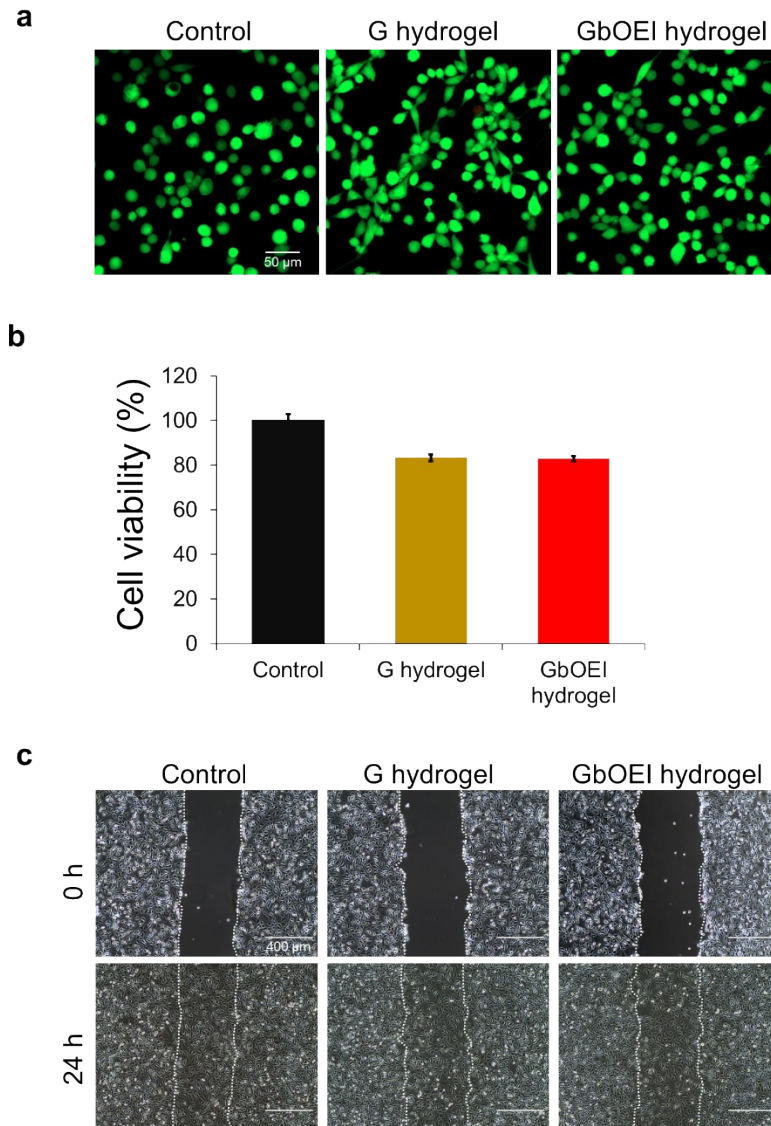


Figure S1. (a) Fluorescence microscopic images of live/dead assay of L929 cells. Each hydrogel (8 mm disc) was immersed in culture media for 24 h at 37 °C. The supernatants were collected and kept at -80 °C until the use. Cells were exposed to the supernatants for 24 h. (b) Cell viability of L929 cells exposed to G and GbOEI-2 hydrogels. (c) Phase contrast images of L929 cells in wound healing assay. A scratch was formed to confluent cultured L929 cells on 6 well plates using a pipettor. The medium or supernatant were added to the cells and cultured for 24 h.

Table S1. Comparison of adhesive strength, anti-inflammatory properties of different tissue adhesives.

Adhesive	Biocompatibility	Adhesive strength (kPa)	ROS scavenging ability	Ref
Fibrin glue	yes	~2	no	Nishiguchi, A. et al., <i>ACS Appl Bio Mater</i> 3, 9093–9100 (2020).
Duraseal	yes	~15	no	Komatsu, H. et al., <i>Macromol. Biosci.</i> 23, e2300097 (2023)
4arm-PEG crosslinked gel	yes	13	no	Henise, J. et al., <i>J. Biomed. Mater. Res. B Appl. Biomater.</i> 105 , 1602–1611 (2017)
α -linolenic acid based gel	yes	6	yes	Mizuno, Y. et al., <i>ACS Appl. Bio Mater.</i> 3, 6204–6213 (2020)
GbOEI-2	yes	20	yes	-



Video S1. In vivo tissue adhesive test of GbOEI hydrogel using small intestine of porcine.