

Supporting Information

Self-healing and anti-oxidative mucus-inspired hydrogel

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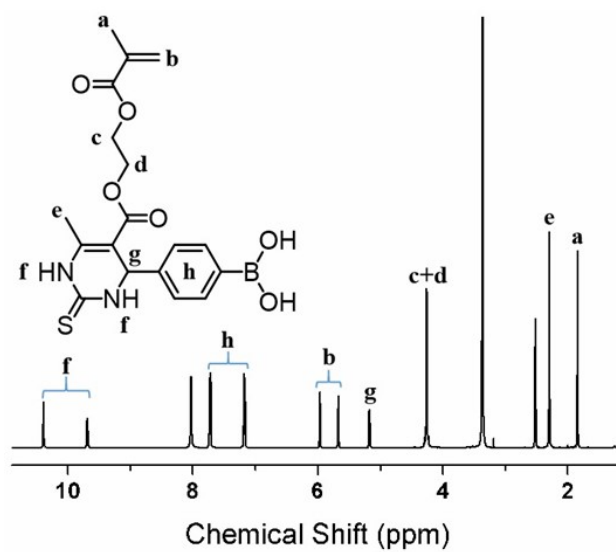


Figure S1. ¹H NMR spectrum of PBA-DHPM monomer.

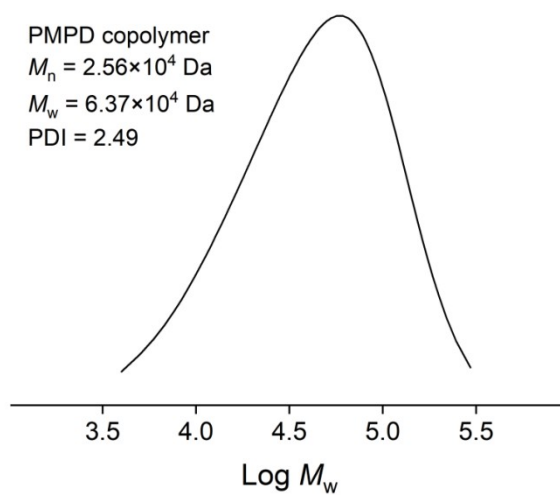


Figure S2. GPC curve of PMPD copolymer measured by aqueous GPC.

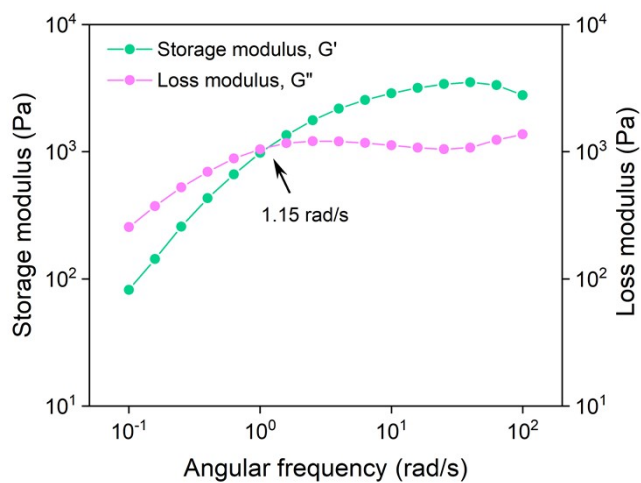


Figure S3. Frequency sweep (0.1-100 rad/s) of P1M1 gel at a fixed strain of 1%.

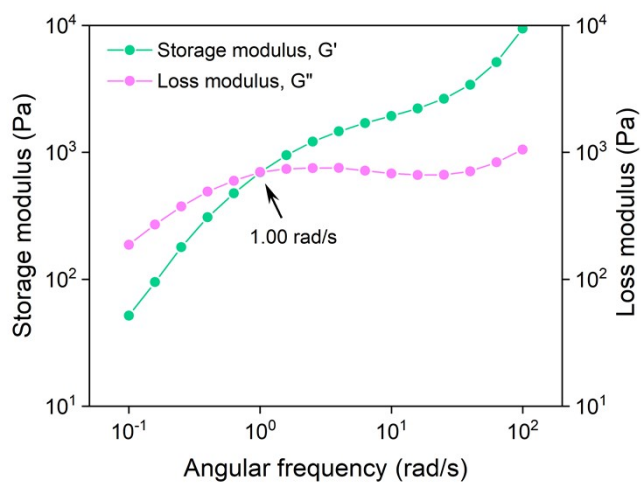


Figure S4. Frequency sweep (0.1-100 rad/s) of P2M1 gel at a fixed strain of 1%.

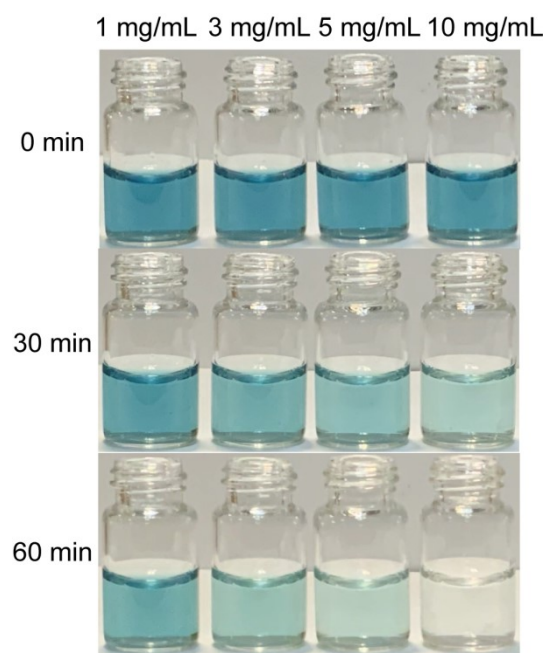


Figure S5. Photographs of $ABTS^{+}$ solutions after co-incubation with different amount of PMPD copolymer (1, 3, 5, and 10 mg/mL) at (i) 0 min, (ii) 30 min, and (iii) 60 min.

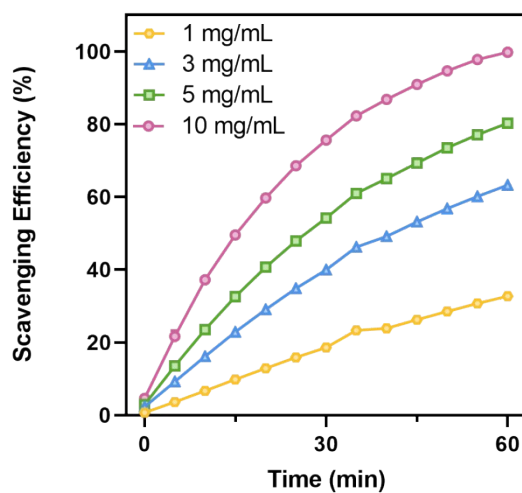


Figure S6. $ABTS^{+}$ scavenging efficiency of PMPD copolymer.

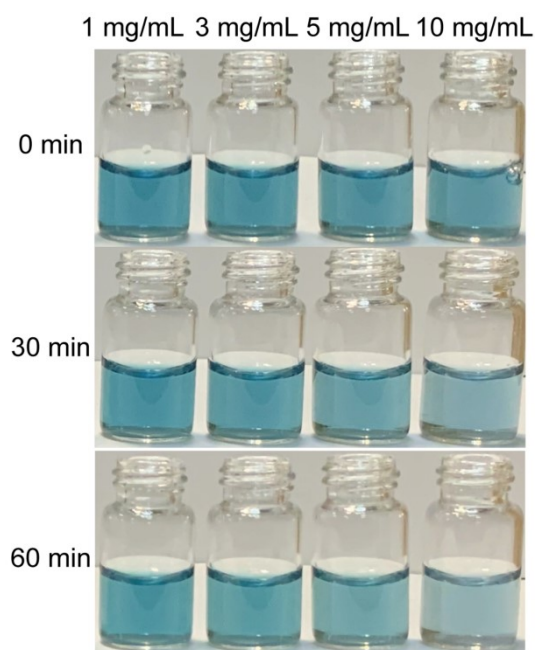


Figure S7. Photographs of ABTS⁺ solutions after co-incubation with different amount of mucin (1, 3, 5, and 10 mg/mL) at (i) 0 min, (ii) 30 min, and (iii) 60 min.

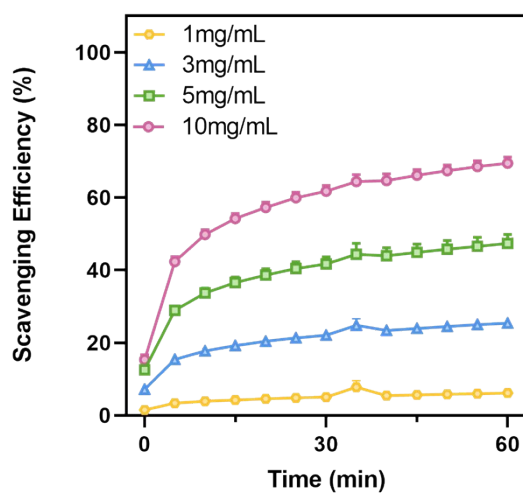


Figure S8. ABTS⁺ scavenging efficiency of natural mucin.

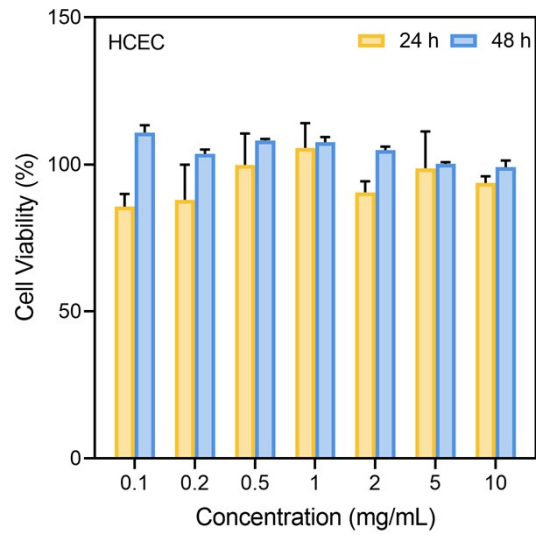


Figure S9. Cell viability of HCEC cells after co-incubation with different concentrations (0.1, 0.2, 0.5, 1, 2, 5, and 10 mg/mL) of PMPD copolymer.

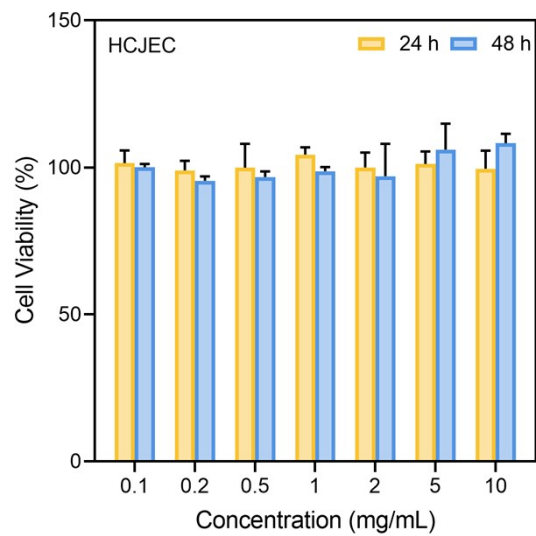


Figure S10. Cell viability of HCJEC cells after co-incubation with different concentrations (0.1, 0.2, 0.5, 1, 2, 5, and 10 mg/mL) of PMPD copolymer.

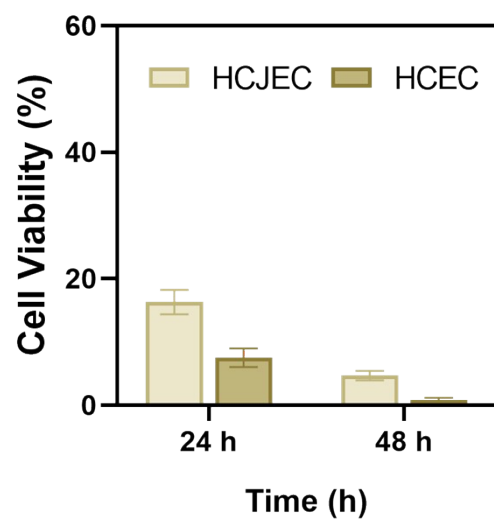


Figure S11. Cell viability of HCEC and HCJEC cells after co-incubation with culture medium containing 10% DMSO for 24 and 48 h.