Electronic Supplementary Information

In situ forming gelatin hydrogels by dual-enzymatic cross-linking for enhanced tissue adhesiveness

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Materials and Methods

Rheology

The rheological measurement was performed using a rheometer (Advanced Rheometer GEM-150-050, Malvern Instruments, Malvern, UK) in oscillatory mode, where frequency was varied from 0.1 to 20 Hz at a fixed strain (0.01%). The measurements were conducted at 37°C. The GH hydrogels formed by single- or dual-enzymatic cross-linking were prepared on the bottom plate of rheometer. After 10 min and 30 min gelation, the upper cone was lowered to a measuring gap size of 0.5 mmm and the elastic modulus (G') was recorded.

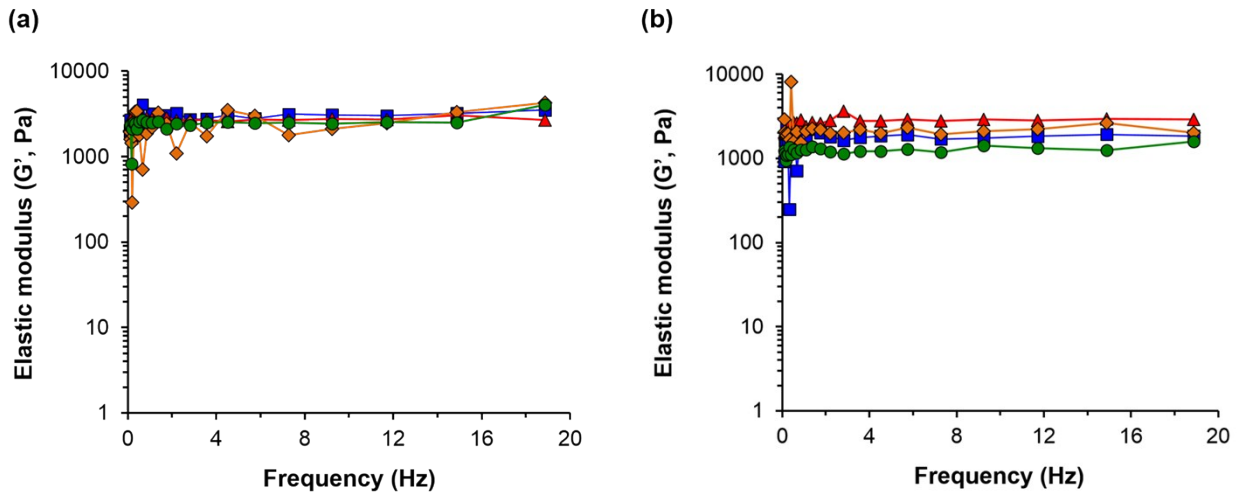

Fig. S1. Frequency sweep data showing elastic modulus (G') of GH/HRP (▪), GH/HRP/Tyr0.25 (▲), GH/HRP/Tyr0.5 (♦) and GH/HRP/Tyr5 (●) hydrogels at 37°C after 10 min (a) and 30 min (b) gelation.

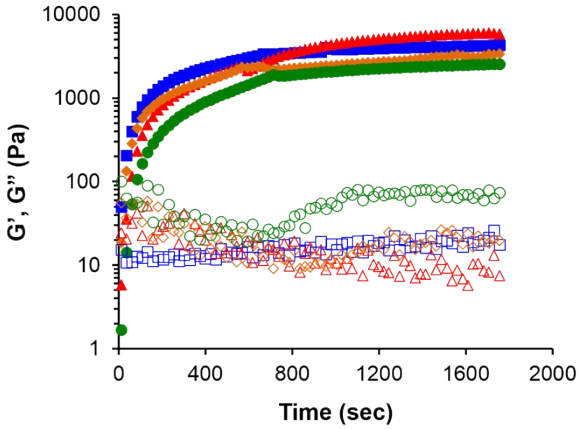

Fig. S2. Time sweep of GH hydrogels as a function of Tyr concentration. G' values (solid fill) and G" values (no fill) for GH/HRP (▪), GH/HRP/Tyr0.25 (▲), GH/HRP/Tyr0.5 (♦) and GH/HRP/Tyr5 (●) hydrogels were measured at frequency of 0.1 Hz.