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## Supporting information

## Hybrid PNA-peptide hydrogels as injectable CEST-MRI agents

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Figure S1: ESI mass spectrum of a-K2 peptide



Figure S2: ESI mass spectrum of c-K2 peptide



Figure S3: ESI mass spectrum of g-K2 peptide



Figure S4: ESI mass spectrum of t-K2 peptide



**Figure S5:** Fluorescence emission spectra of peptide solution (at a concentration of  $5 \cdot 10^{-6}$  M) excited at 260 nm.



Figure S6: Frequency and oscillation strain sweeps for c-K2 and c-K2/g-K2 HGs.



**Figure S7:** Cell viability assessed by MTT assay for GL261, TS/a and 3T3-NIH cells incubated in presence of medium conditioned with c-K2/g-K2 3% *w/v* mixed hydrogels.



**Figure S8:** Z- and ST-spectra at t=0 (blue line) and t=24h (red line) of c-K2/g-K2 3% w/v hydrogels implanted under the skin.



**Figure S9:** a) Z- and b) ST-spectra of c-K2/g-K2 3% *w/v* hydrogel in presence of salicylic acid (*blue line*) compared to free salicylic acid (*green line*) or empty hydrogel (*magenta line*).