Chiral, thermal-responsive hydrogels containing helical hydrophilic polyacetylene: preparation and enantio-differentiating release ability

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\textbf{Figure S1.} GPC traces of R-HPA and S-HPA in THF.
Figure S2. FT-IR and $^1$H NMR of HPA

Figure S3. (a) CD and (b) UV-vis absorption spectra of HPA (R or S) measured in aqueous solution at a specific concentration (100 mg/L)

Figure S4. Photographs of the prepared chiral hydrogels (a) N-HGs and (b) R-HGs.
**Figure S5.** FT-IR spectra of NIPAm, HPA and R-HGs. (KBr tablet).

**Figure S6.** Typical SEM image of S-HGs.

**Figure S7.** Photomicrographs of MC3T3-E1 cells cultured for 2 days in the extracts of (a) blank (b) N-HGs (c) R-HGs and (d) S-HGs.

**Figure S8.** Viability of MC3T3-E1 cells for 1 and 2 days in the extracts of N-HGs, R-HGs and S-HGs, tested by using CCK-8 assay.
Figure S9. Photomicrographs of MC3T3-E1 cells cultured for 3 days using hydrogels of (a) blank (b) N-HGs, (c) R-HGs and (d) S-HGs.

Figure S10. Time-release profiles of D-proline and L-proline released by (a) R-HGs and (b) and S-HGs.

Figure S11. e.e.-time profiles of racemic proline released from R-HGs and S-HGs.

Figure S12. (a) CD and (b) UV-vis spectra of rac-HGs measured through compressing method.
Figure S13. e.e.-time releasing profile of racemic mandelic acid from rac-HGs.