

Supporting Information

Development of self-assembled peptide hydrogels containing matrix-metalloproteinase degradable motifs for 3D lung cancer models

Burcu Sirma Tarım,^a Sedef Tamburacı^a and Ayben Top^{*a}

Department of Chemical Engineering, Izmir Institute of Technology, Izmir 35430, Türkiye

*Corresponding author: E-mail: aybentop@iyte.edu.tr

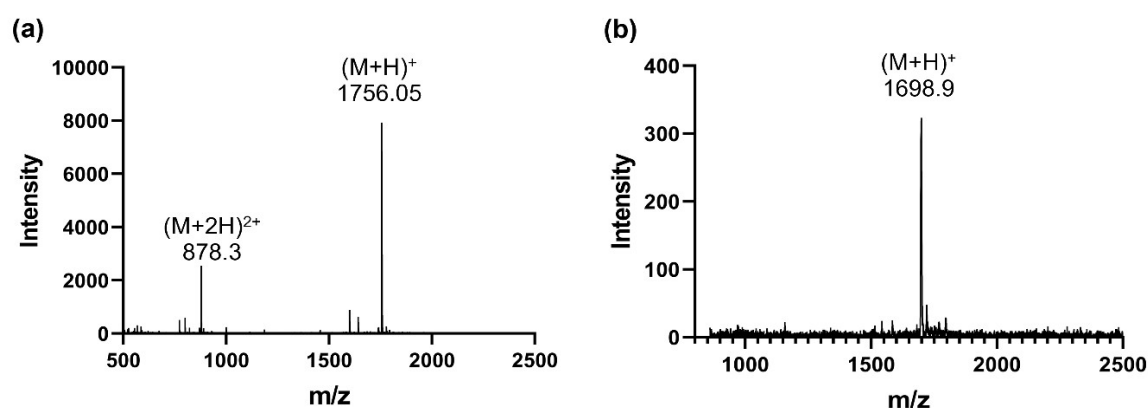


Fig. S1. MALDI-TOF mass spectroscopy results of (a) EDP1 and (b) EDP2 peptides.

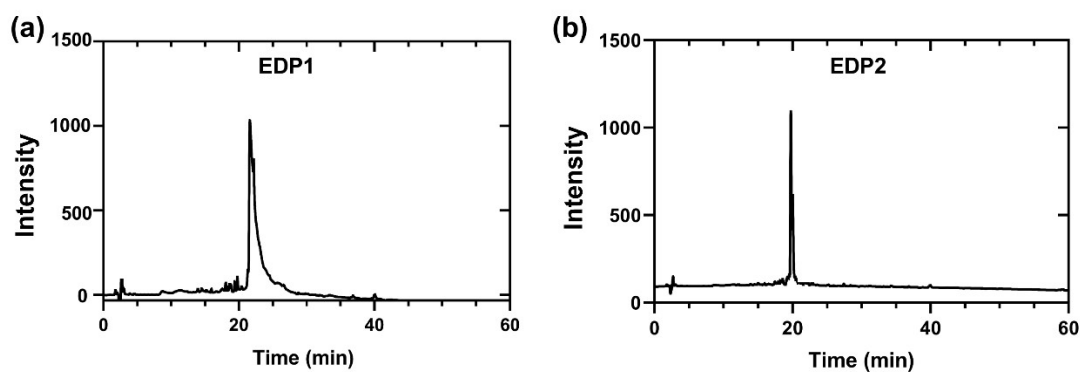


Fig. S2. RP-HPLC results of (a) EDP1 and (b) EDP2 peptides.

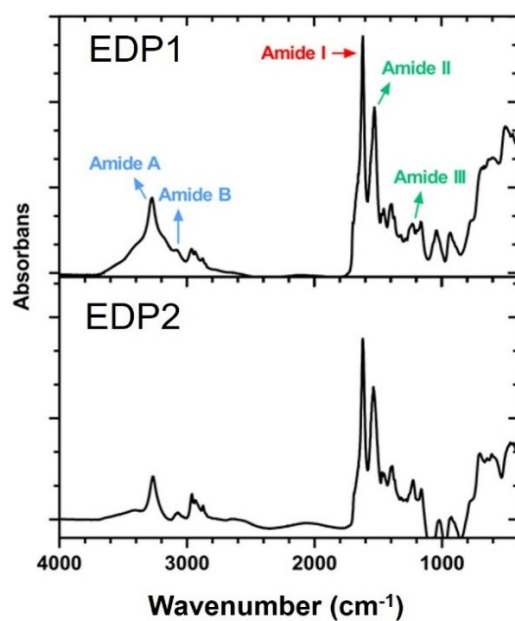


Fig. S3. ATR-FTIR spectra of the peptide hydrogels from 4000 to 400 cm^{-1} .

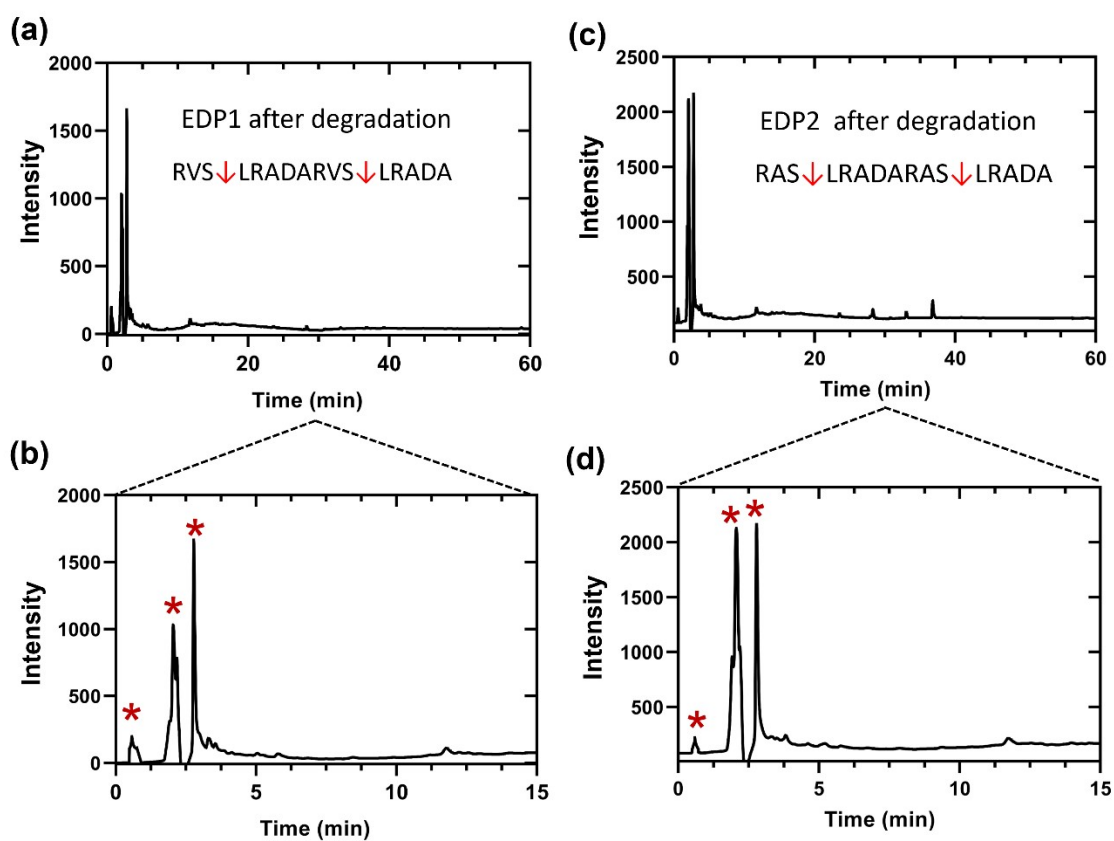


Fig. S4. RP-HPLC results of (a-b) EDP1 and (c-d) EDP2 peptides after treatment with MMP-2 for 48 h.

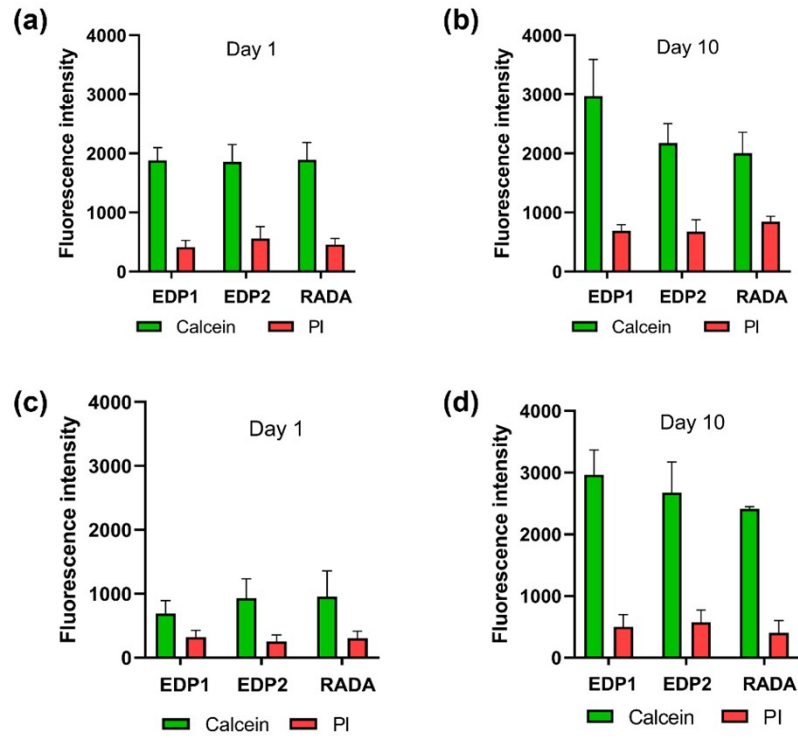


Fig. S5. Calcein and PI fluorescence intensities of (a-b) seeded A549 cells after 1 and 10 days, and (c-d) encapsulated A549 cells after 1 and 10 days, respectively.

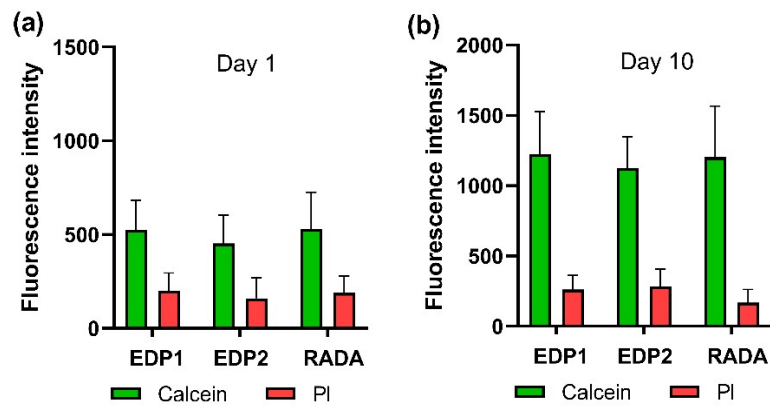


Fig. S6. Calcein and PI fluorescence intensities of the stained MRC-5 cells encapsulated in the hydrogels after (a) 1 and (b) 10 day(s) of incubation.

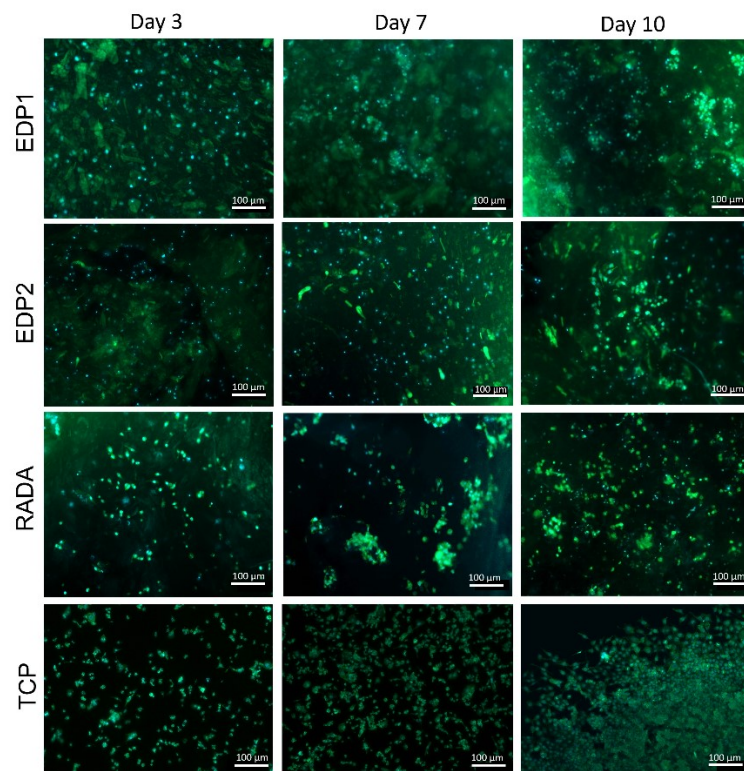


Fig. S7. Fluorescence images of DAPI/phalloidin staining of the cells seeded on the hydrogels and TCP surfaces on 3, 7, and 10 days. Scale bars: 100 μm .

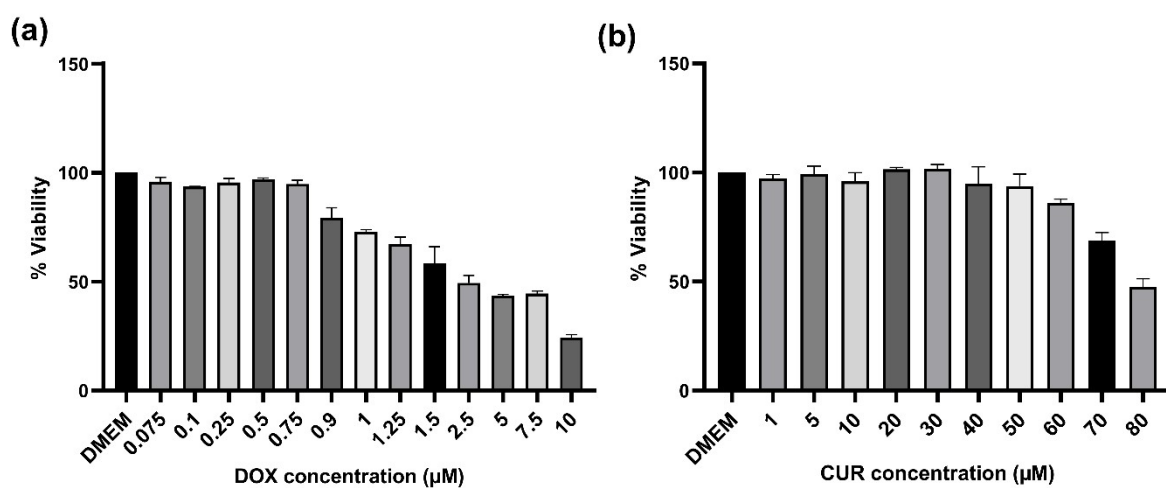


Fig. S8. Viability of A549 cells in 2D monolayer after treatment with different concentrations of (a) DOX and (b) CUR for 48 h.

Table S1.
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Samples	Peptide sequences	Molar Mass (Da)	Net charge at pH 7.4
EDP1	RVSLRADARVSLRADA	1755.0	3+
EDP2	RASLRADARASLRADA	1698.9	3+

n, sequences, molar mass and physical properties of the peptides.

Table S2. Secondary structure of the peptides estimated using the BestSel program.

Sample	Helix	Antiparallel	Parallel	Turn	Others	NRMSD
EDP1	3.9	38.5	9.8	12.6	35.2	0.0281
EDP2	2.1	37.2	0.0	21.0	39.7	0.0331