ADVANCED HEALTHCARE MATERIALS

Supporting Information

Ionic Liquid-Mediated Transdermal Delivery of Thrombosis-Detecting Nanosensors

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Nanoparticle	Description
TDN-qFAM	*5FAM*-GGfPRSGGGK*(CPQ2)*-*(EG)₂*-C-[8armPEG]
TDN-FAM	*5FAM*-GGfPRSGGGK-*(EG)₂*-C-[8armPEG]
TDN-Cy7	*Cy7*-GGfPRSGGGK-*(EG)₂*-C-[8armPEG]
TDN-VT	VivoTag750-[8armPEG]

Table S1. Description of nanoparticles used in this work. TDN-qFAM: Quenched thrombosis detecting nanosensors; TDN-FAM: Unquenched 5-carboxyfluorescein conjugated thrombosis detecting nanosensors; TDN-Cy7: Unquenched Cy7 conjugated thrombosis detecting nanosensors; TDN-VT: VivoTag750 labelled PEG nanoparticles; *CPQ2*: Quencher molecule; *5FAM*: 5-carboxyfluorescein. *(EG)₂* denotes repetitive ethylene glycol units. Lower case amino acids denote d-stereoisomers.
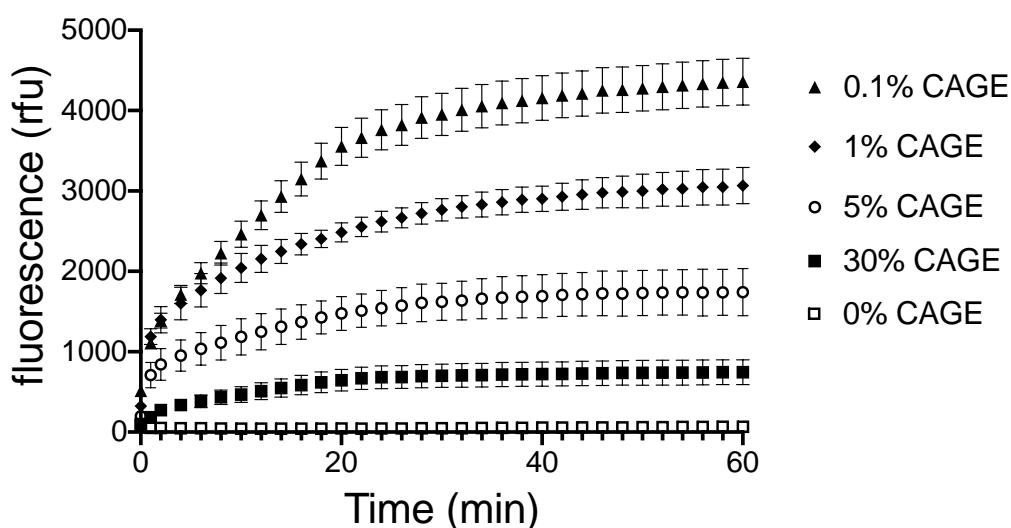

Figure S1. Cleavage kinetics of TDN-qFAM dissolved in different CAGE concentrations and incubated in mouse serum at 37 °C (mean ± s.d., n =3 independent measurements of the same sample).
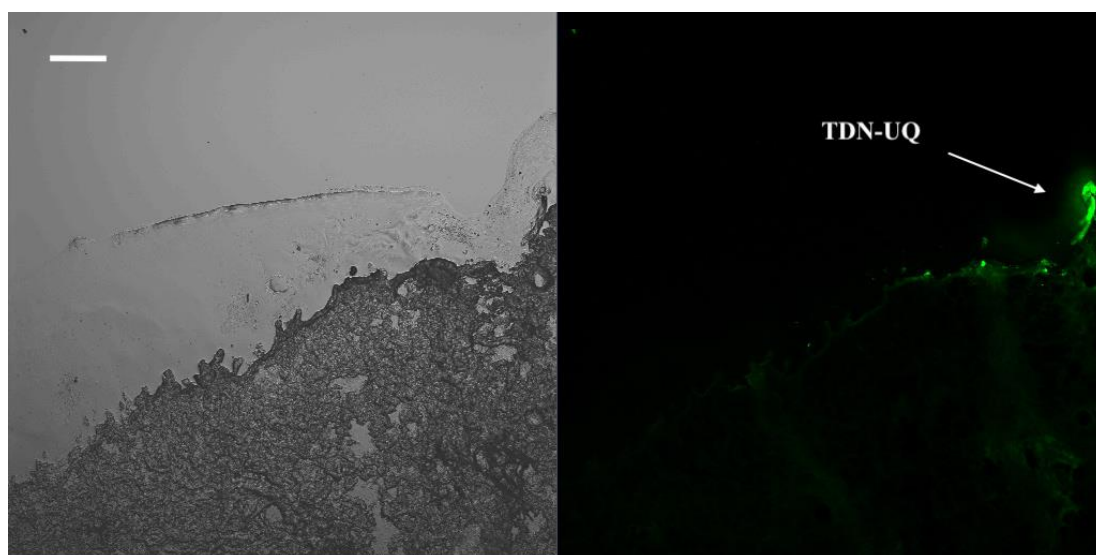
Figure S2. A representative confocal brightfield (left) and fluorescence (right) image of TDN-UQ administered in PBS on porcine skin. The lack of fluorescent signal over the large part of dermis layer indicate that nanosensors in PBS cannot be transported through the skin and mostly stuck at the outermost stratum corneum layer. (Scale bar: 200µm).
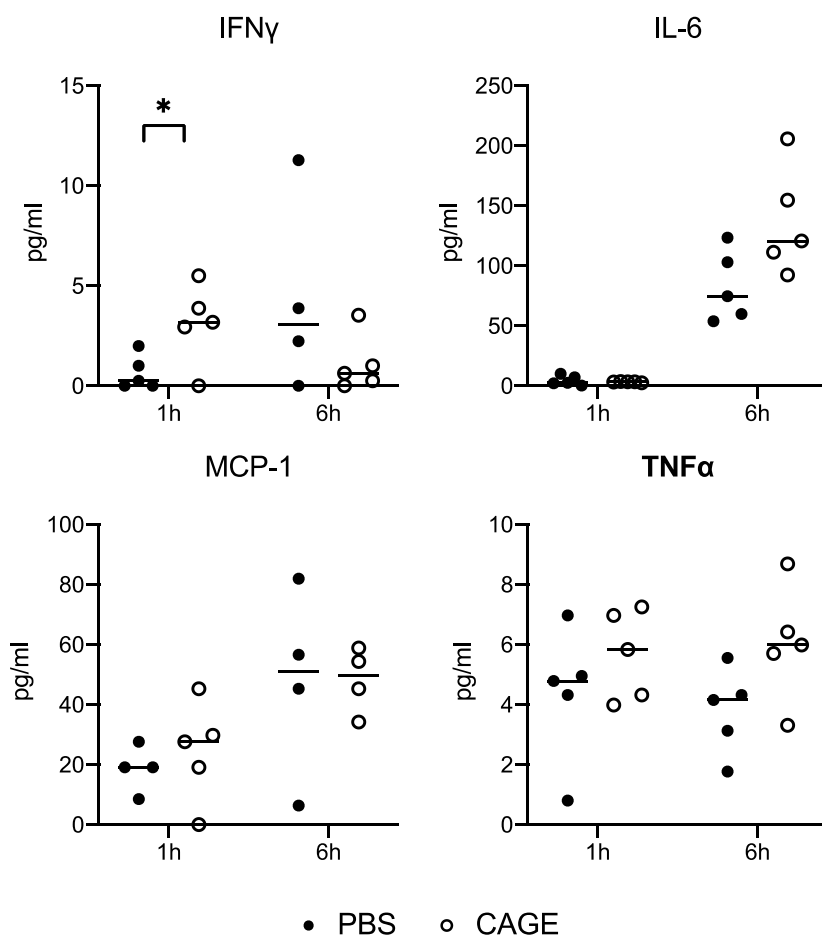
Figure S3. A mouse proinflammatory cytokine analysis for CAGE treated and PBS treated Swiss Webster mice after 1h and 6h of topical administration (lines: mean, n=5 per group). *P < 0.05, two-tailed Mann-Whitney's t-test).