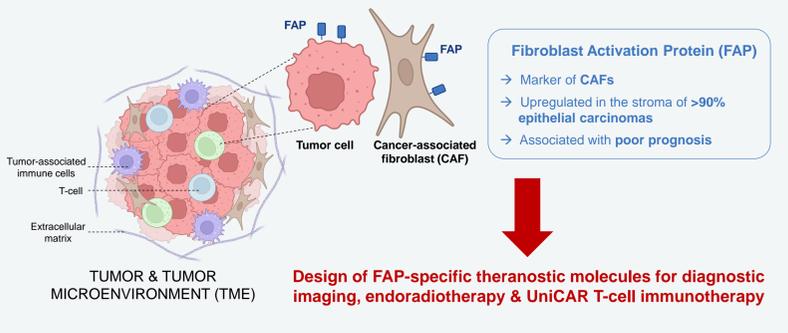


Novel Monomeric FAPI Target Modules Enable Diagnostic Imaging and Elimination of FAP-positive Cells by UniCAR T-cells

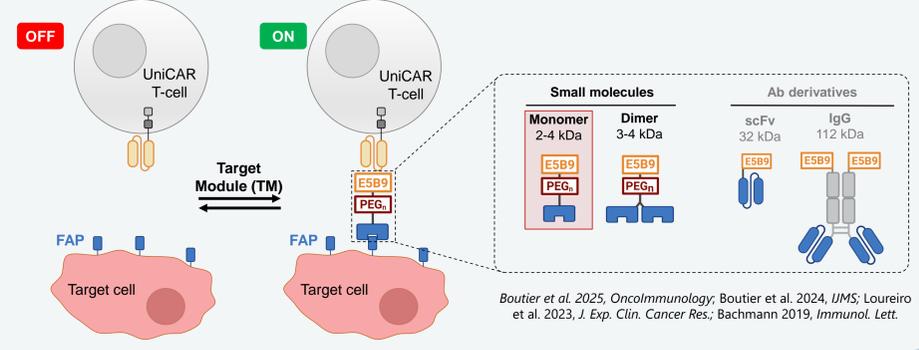
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Tumor microenvironment targeting



FAP targeting using the UniCAR system



I – TM computational design and chemical synthesis

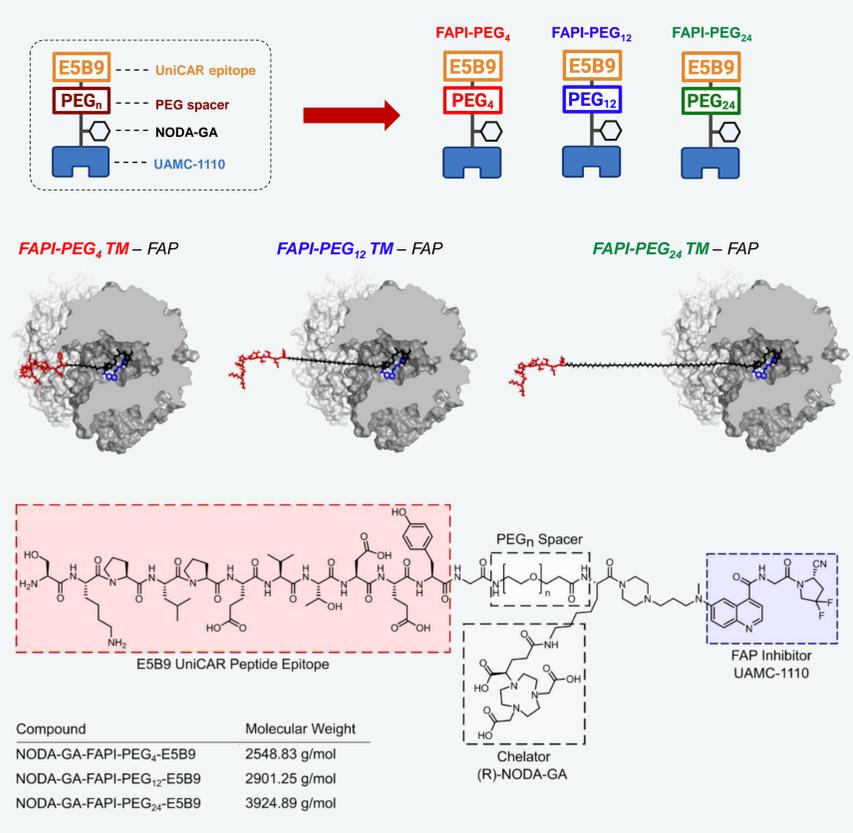


Fig. 1. Molecular docking study and synthesis of monomeric FAPI TMs

III – In vivo UniCAR T-cell immunotherapy mediated by FAPI TMs

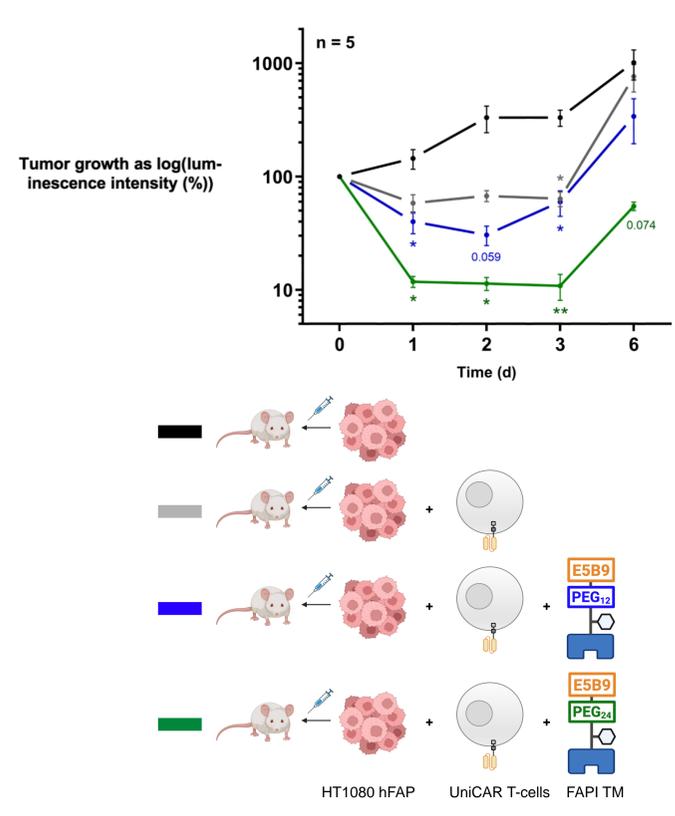


Fig. 3. In vivo killing of HT1080 hFAP tumor cells by UniCAR T-cells redirected by FAPI TMs

II – In vitro redirection of UniCAR T-cells by FAPI TMs

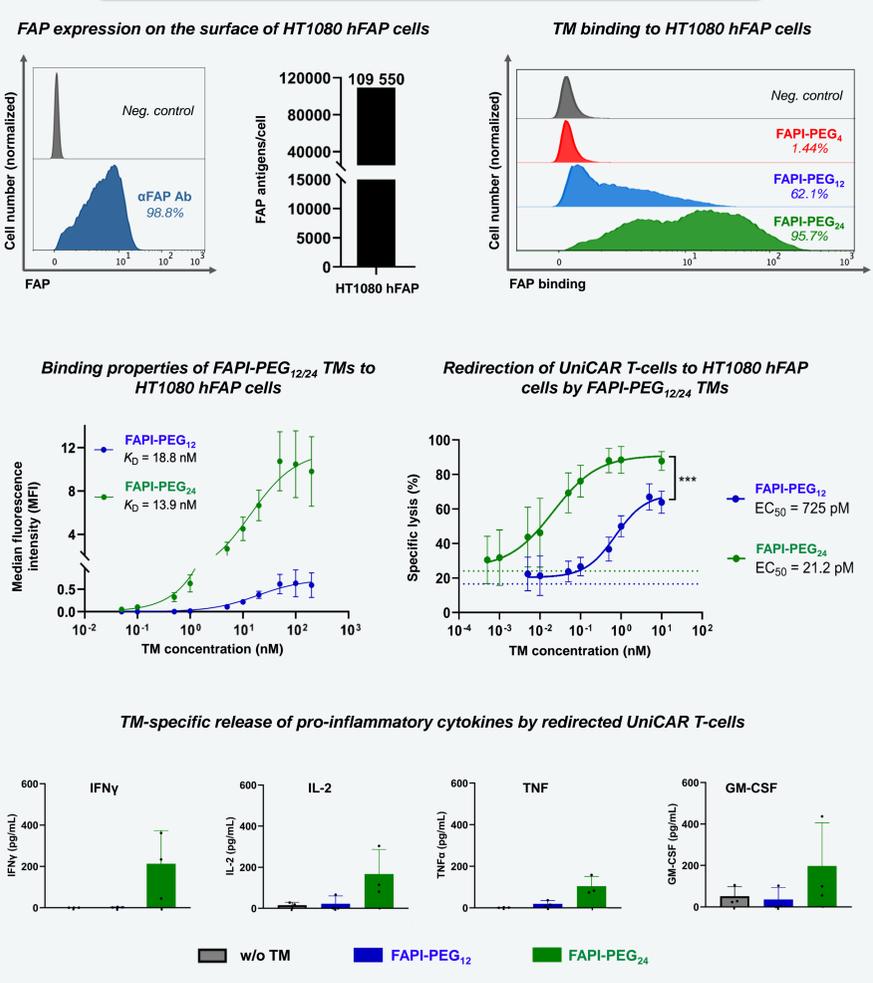


Fig. 2. Assessment of the binding properties of FAPI TMs to HT1080 hFAP cells and evaluation of cytotoxicity and pro-inflammatory cytokine production by UniCAR T-cells redirected by FAPI TMs

IV – Successful non-invasive diagnostic imaging

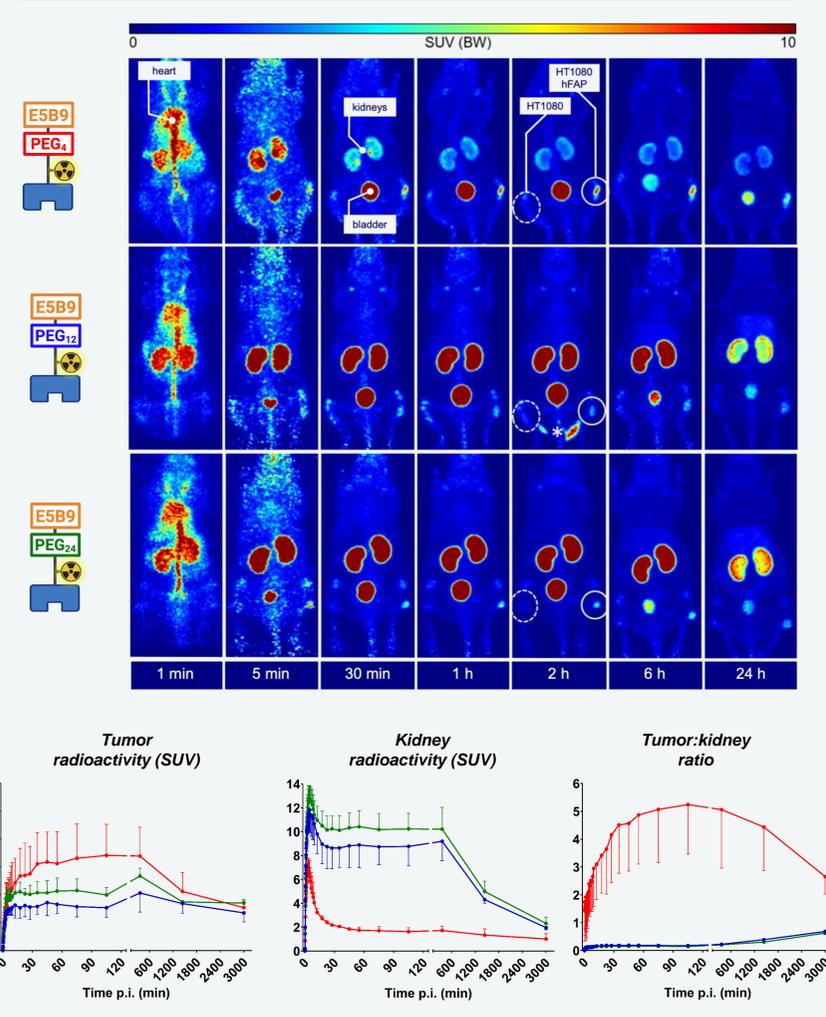


Fig. 4. Specific accumulation of copper-64 radiolabeled FAPI TMs in FAP⁺ tumors in vivo

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