

SUPPLEMENTARY FIGURES

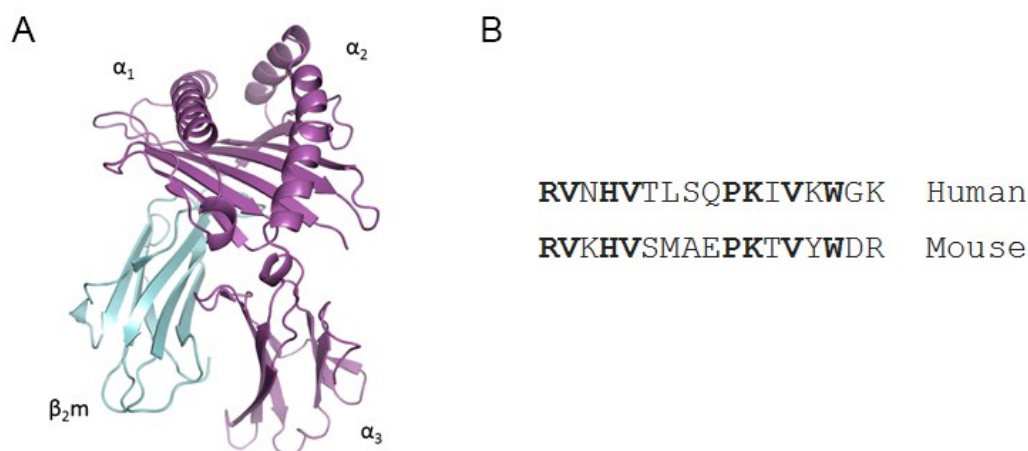


Figure S1. Structure and used epitopes of β 2Microglobulin (B2M). (A) Schematic representation of the structure of the human histocompatibility antigen HLA-A2 showing the positions of the α_1 , α_2 , α_3 and B2M domains. Structure adapted using PyMOL 1.0. (B) Homologies between the protein sequences of the B2M epitope in human and mice, using a BLAST alignment.

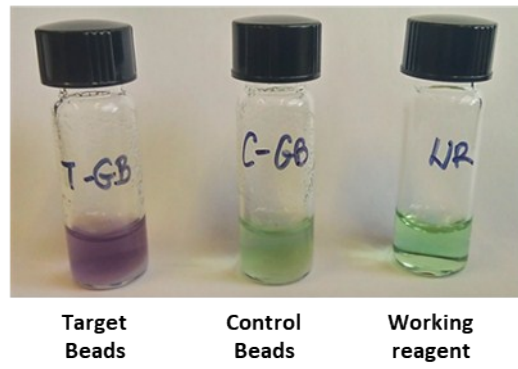


Figure S2. BCA colorimetric assay showing a successful peptide immobilization in the target beads.

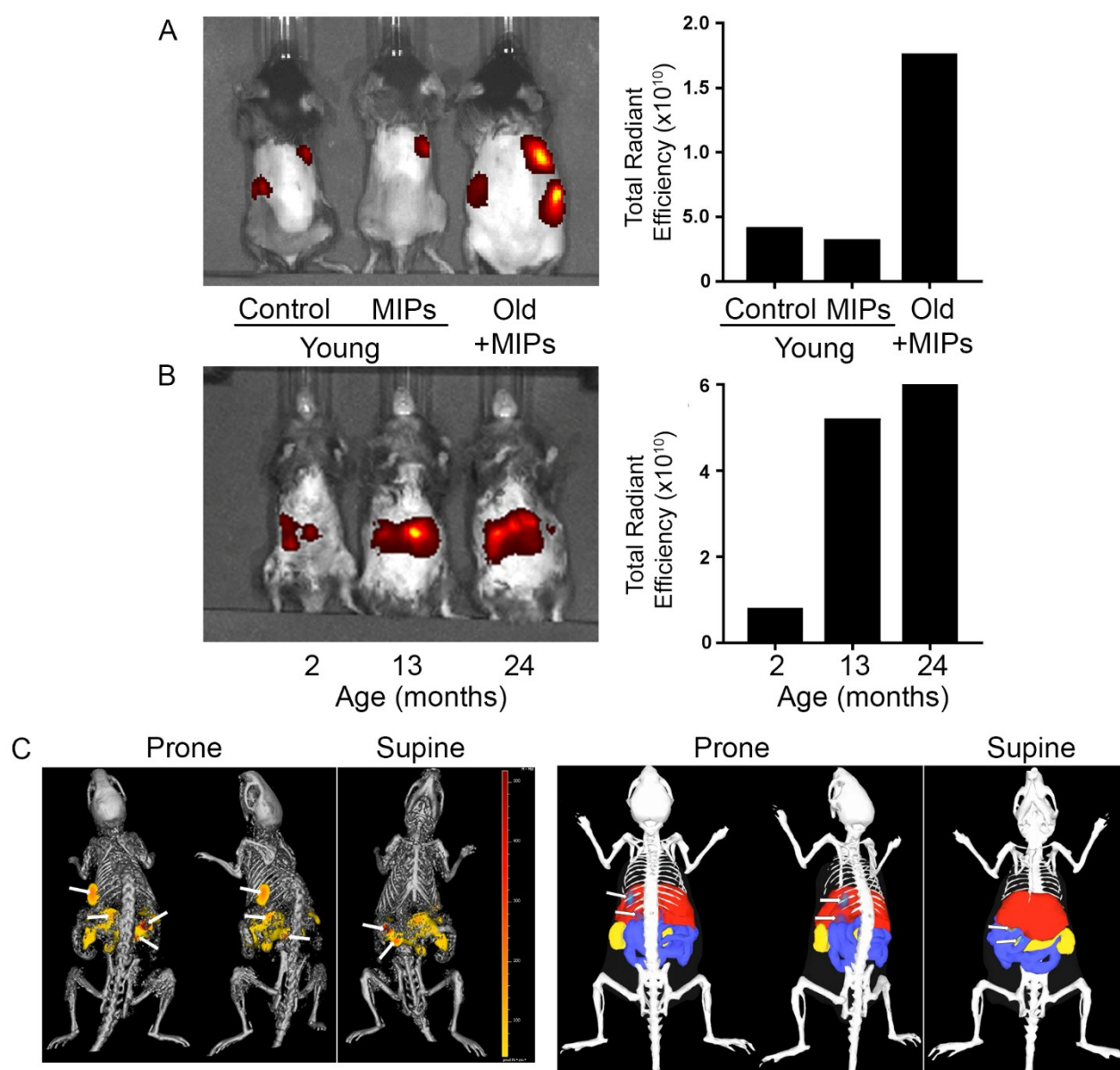


Figure S3. In vivo imaging of fluorescent B2M NanoMIPs. (A) Representative images of young (2 months) and old (15 months) mice injected intravenously with Alexa Fluor 647-tagged B2M MIPs. Control mice were injected only vehicle. Animals were imaged in the prone position 2 hours after injection. Total fluorescence signals were quantified and are shown in units of radiant efficiency. (B) Same as (A), with another group of mice of different ages, imaged in supine position. (C) 3D whole-body micro-CT (top) and fluorescence imaging tomography (FLIT, bottom) of the 15 month old mouse in (A). Arrows show the localization of fluorescent signals, which map to the right lung, right kidney and jejunum areas. Of note, lung and kidney also showed background fluorescence in young and untreated mice.

SUPPLEMENTARY TABLES

Parameters		Score
Appearance	- Normal	0
	- Slight piloerection	1.5
	- Marked piloerection	3
	- Changes from normal to signs of deterioration of coat and skin	4-6
Natural behaviour	- Normal	0
	- Minor changes	1
	- Less mobile and isolated	2
	- Restless or very still	3-6
Food and water intake	- Normal	0
	- Body weight loss <5%	3
	- Body weight loss <10% - < 20%	4-6
Hydration status	- Normal	0
	- Abnormal skin pinch test	2.5
	- Very Abnormal skin pinch test	2.5-6
Body changes	- Normal	0
	- Backbones visible	3
	- Backbones very visible	6
	- Tachypnoea (fast breathing)	3
	- Dyspnoea (difficult breathing)	6
Locomotion	- Slightly abnormal gait/posture	0-1.5
	- Markedly abnormal gait/posture	3-6
Muscle tone	- Muscle groups have normal tone or mass	0
	- Muscle mass slightly soft	2
	- Muscle mass less firm, abdomen slightly soft	3
	- Muscle mass very thin, soft, undefined	4
	- Muscle mass has no tone or definition	5-6
Specific Indicators	- Tumour size >1.0cm ³	6
	- Tumour impeding movement	6

Table S1. Frailty score to assess the impact of nanoMIPs on mouse health. All mice had a total score of 0 when adding all parameters, for the duration of the study. Mice were assessed daily.