## Supplementary information

## Highly specific targeting of human acute myeloid leukaemia cells using pharmacologically active nanoconjugates

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Supplementary figure 1. Nanoconjugates (NCJ, anti-Tim-3-ScAb-AuNP-Rapamycin) are stable at different pH and increasing temperature. NCJ were exposed to increasing pH (A) and temperature (B) conditions followed by precipitation and Western blot analysis of the supernatant for the presence of anti-Tim-3-ScAb. A solution of anti-Tim-3-ScAb at the concentration used to immobilise the antibody on the gold surface was employed as a positive control. The presence of antibodies on the AuNPs was verified using a LiCor assay applying a fluorescent dye-labelled secondary antibody (1h at room temperature). Nanomaterials were then precipitated and scanned for the presence of secondary antibodies. Images are from one experiment representative of three which gave similar results.



Supplementary figure 2. NCJ size distribution by ImageJ-NANODEFINE Particle Sizer plugins, and TEM image by JEOL JEM 2100 at 120kV.



Sample	Mass percent (%)								
	Ν	0	Na	Р	S	CI	К	Cr	Au
AuNPs	8.58	17.16	2.46	-	0.89	-	-	10.84	60.07
AuNPs+Ab	0.92	4.69	2.53	-	2.28	-	-	8.63	80.95
NCJ	2.01	4.51	0.13	-	5.54	-	-	64.82	22.99
Ab	8.27	27.06	17.67	13.86	14.33	6.92	2.41	9.48	-

Supplementary figure 3. Dispersive X-ray spectroscopy (EDX). Spectra were acquired in TEM mode (120 kV) for each sample; relative values are expressed in mass % of the whole sample.