SUPLEMENTARY MATERIAL

Supplementary Methods

Nanosizer and Zetasizer Measurements

The particle size of vector/Dbait was determined by dynamic light scattering (DLS) on Zetasizer nano series, (Malvern instruments, Paris, France) with these specifications: medium viscosity: 1.150 cP, refractive index: 1.45, scattering angle: 90°, temperature: 25°C. Data are the mean of 3-5 measures per sample with each measure being the average of 10-15 sub-runs. Data were analyzed using the multimodal number distribution software supplied with the instrument. For the zeta-potential measurement, particles were diluted in 10% sucrose/10 mM NaCl to give a final Dbait concentration of 0.1 mg/mL and were measured with the following specifications: three measurements, medium viscosity: 1.054 cP, medium dielectric constant: 79, temperature: 25°C.

Transmission Electron Microscopy

Samples were prepared for transmission electron microscopy by negative staining with uranyl acetate. A drop of sample (10 µL) was deposited on the grid (formvar/carbon on 200 mesh copper, AGAR scientific) and left for three minutes before removing excess liquid with blotting paper. The complexes were then stained with 10 µL of aqueous uranyl acetate (2%) for 2 min and the excess was removed with blotting paper. Observations were performed with a Jeol JEM-100S Electron Microscope.

Supplementary Table

Table S1. Physico-chemical properties of formulated Dbait particles

nanoparticles	Ratio[a] (N/P)	Size[b] (nm)	Zeta[c] (mV)	PdI	$[C]_{max}$ (mg/mL)	Supplier
Dbait/Superfect	-	>1000	-	1	nd	Qiagen
Dbait/bPEI25K	9	175±51	+ 40	0.11	1,5	Sigma-Aldrich
Dbait/PEI22K	6	33	+ 46	0.17	1.0	Polyplus Transfection
Dbait/PEI11K	6	125±13	+ 30	< 0.2	0,8	Polyplus Transfection

[a] N/P ratio at which maximum Dbait activity is observed (applied only for PEI)

[b] Mean diameter (+/- SD) as determined by dynamic light scattering (see supplementary Material and Methods).

[c] Particles in 1% sucrose, 10 mM NaCl

Supplementary Figure

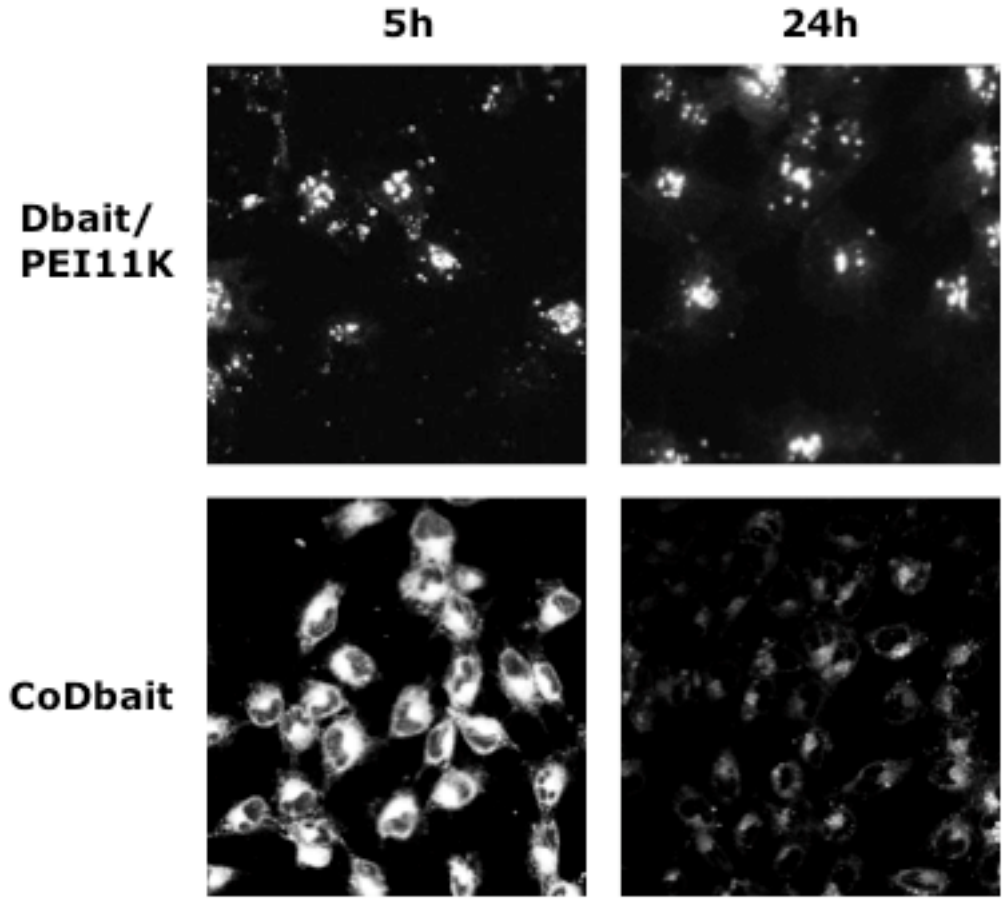

Figure S1. Cellular location of Dbait and coDbait. MRC5 cells were treated for 5 h with 2 mg Dbait-cy3/PEI11K or 50 mg coDbait-cy3. They were washed once with PBS and observed by confocal microscopy immediately after treatment (5 h) or the following day (24 h).