Electronic Supplementary Material (ESI) for RSC Advances.

Building a chimera of aptamer-antisense oligonucleotide for silencing Galectin-1 gene

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Table S1. The sequences and modifications of DNA oligonucleotide sequences used in this paper.

Name	**Sequence (5'-3')**
Apt-AS	TTGGTGGTGGTGGTTGTGGTGGTGGTGG(C6 Spacer)TTCG TATCCATCTGGCAGC
Apt-AS488	TTGGTGGTGGTGGTTGTGGTGGTGGTGG(C6 Spacer)TTCG TATCCATCTGGCAGC**-Alexa 488**
AS	TTCGTATCCATCTGGCAGC
AS488	TTCGTATCCATCTGGCAGC**-Alexa 488**
Galectin-1-F	CCGCTCGAGATGGCTTGTGGTCTGGTCG *Xho*I
Galectin-1-R	ATTTGCGGCCGCTCAGTCAAAGGCCACACATTT *NotI*
qPCR-GAL-F	CAAACCTGGAGAGTGCCTTC
qPCR-GAL-R	GTTGAAGCGAGGGTTGAAGT
β-ACTIN-F	TGGCACCACACCTTCTACAATG
β-ACTIN-R	TCTCAAACATGATCTGGGTCATCT

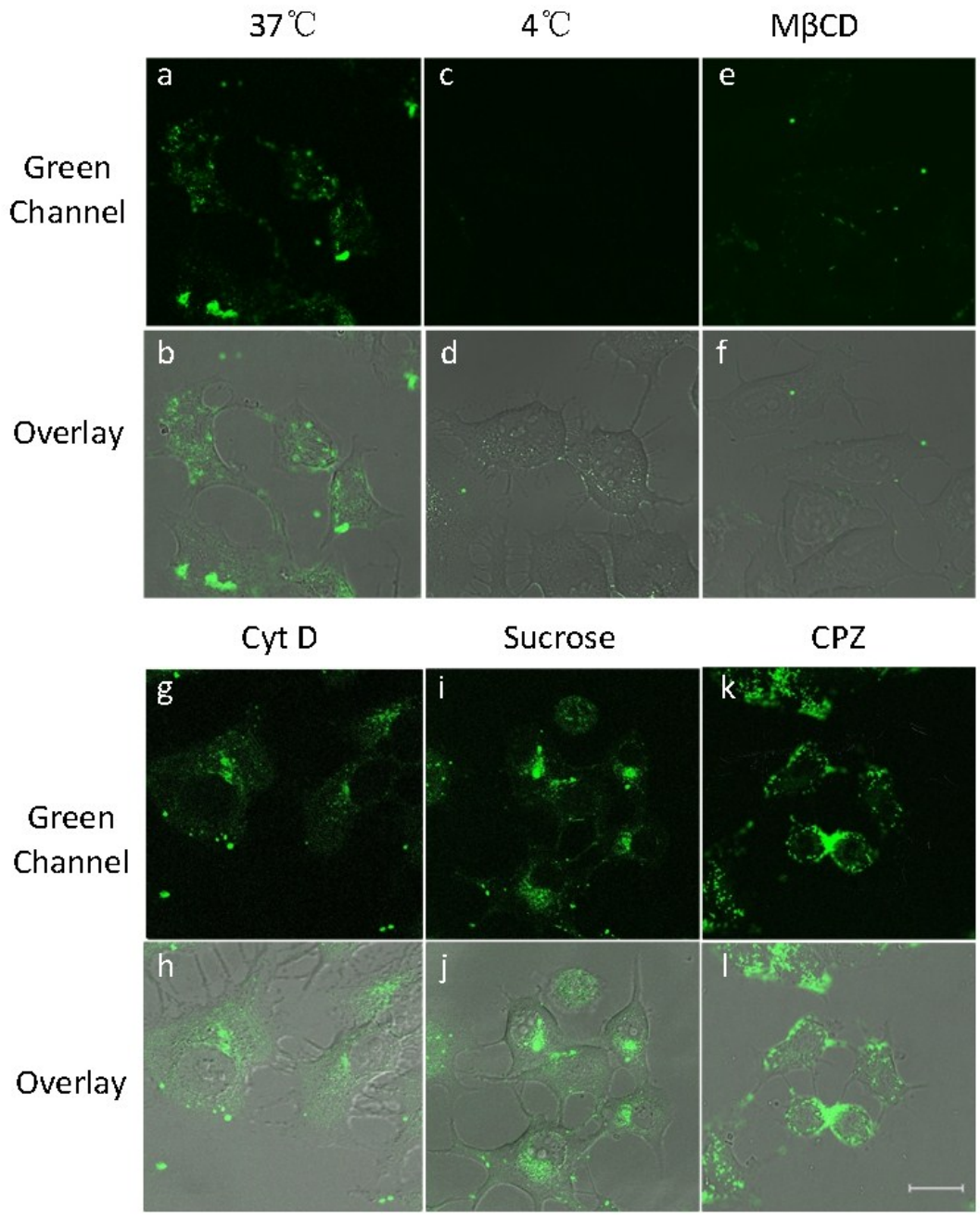

Figure S1. Endocytosis pathway analysis of Apt-AS488 when entering into MCF-7 cells. Confocal fluorescence images of MCF-7 cells after incubation with 10mM MβCD (e, f), 10 μM Cyt D (g, h), 450 mM sucrose (i, j), and 10 μg/mL CPZ (k, l) before international of Apt-AS488. (a, b) MCF-7 cells after incubation with Apt-AS488 at 37℃ without any pretreation. (c, d) MCF-7 cells were pretreated in 4℃ for 30 min, and then incubated with Apt-AS488 in 4℃. Excitation wavelength was set at

488 nm, and the emission wavelength was 510-580 nm, scale bar: 20 μm.

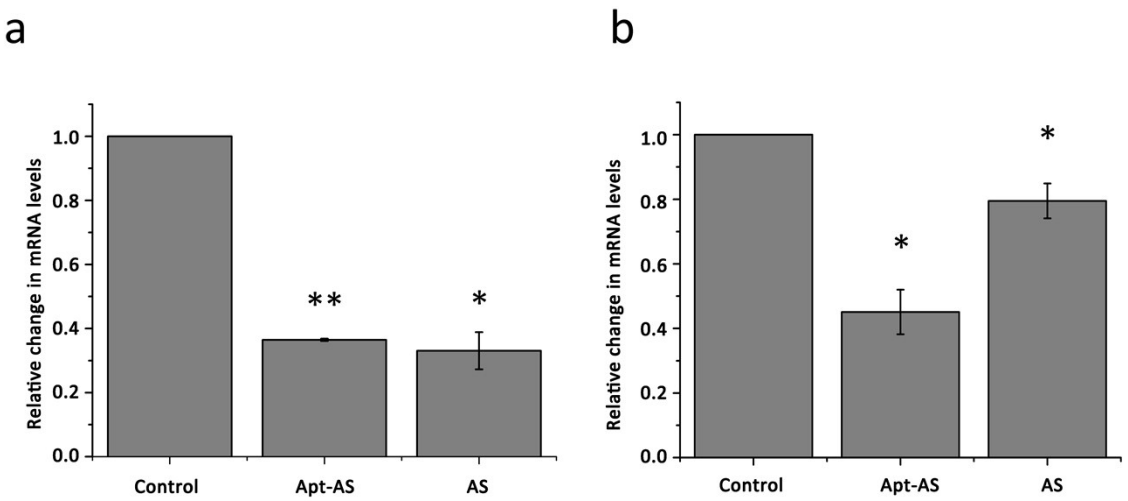

Figure S2. Quantitative polymerase chain reaction (qPCR) of positive control (a) and experimental group (b) with SYBR green method. The Control means the MCF-7 cells only transfect with psiCheck2-Gal-1. The endogenous control was β-actin, and the fold change in expression is plotted. *p<0.1, **p<0.05, n=6.