

Supporting Information for

Inorganic Kernel -Reconstituted Lipoprotein Biomimetic Nanovehicles
Enable Efficient Targeting “Trojan Horse” Delivery of STAT3-Decoy
Oligonucleotide for Overcoming TRAIL Resistance

Kai Shi^{1,*}, Jianxiu Xue¹, Yan Fang¹, Hongshu Bi², Shan Gao¹, Dongjuan Yang¹, Anqi Lu¹,
Yuai Li¹, Yao Chen¹, Liyuan Ke³

1. Department of Pharmaceutics, School of Pharmacy, Shenyang Pharmaceutical University, Shenyang, Liaoning 117004, P. R. China
2. Liaoning Yaolian Pharmaceutical Co., Ltd., Benxi, Liaoning 117004, P. R. China
3. Liaoning Cancer Hospital & Institute, Shenyang, Liaoning 110042, P. R. China

***Corresponding author:** Dr. Kai Shi, Department of Pharmaceutics, School of Pharmaceutical Science, Shenyang Pharmaceutical University, Shenyang 117004, China. Tel: +86-24-43520557. Email address: shikai@syphu.edu.cn.

Supporting Tables

Table S1 Primers used in quantitative real-time PCR

Genes	Primer sequences	Size (bp)	Annealing (°C)
Bcl-2	Forward: 5'-CTGCACCTGACGCCCTTCACC-3'	119	61
	Reverse: 5'-CACATGACCCCACCGAACTCAAAGA-3'		
Bcl-xL	Forward: 5'-GATCCCCATGGCAGCAGTAAAGCAAG-3'	164	63
	Reverse: 5'-CCCCATCCCGGAAGAGTTCATTCACT-3'		
Mcl-1	Forward: 5'- AGA AAG CTG CAT CGA ACC AT -3'	183	56
	Reverse: 5'- CC AGC TCC TAC TCC AGC AAC -3'		
Survivin	Forward: 5'- GCCCAGTGTTTCTTCTGCTT -3'	86	60
	Reverse: 5'- CCGGACGAATGCTTTTTTATG -3'		
β -actin	Forward: 5'- ATTGCCGACAGGATGCAGAAG -3'	214	60
	Reverse: 5'- TTGCTGATCCACATCTGCTGG -3'		

Supporting Figures

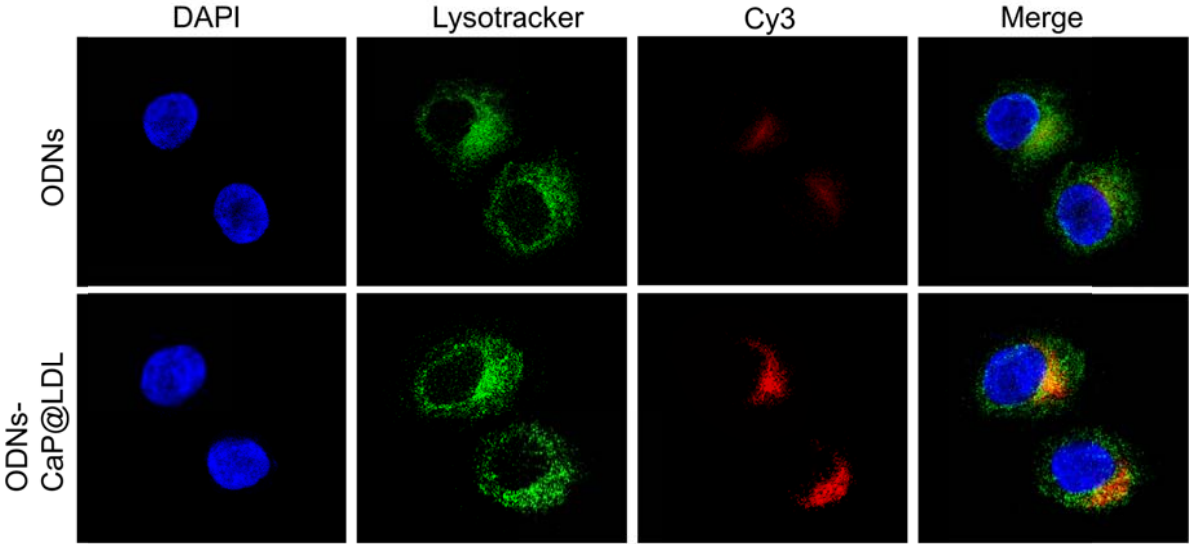


Figure S1. Intracellular trafficking of Cy3-ODNs after 6 h incubation with HepG2 cells.

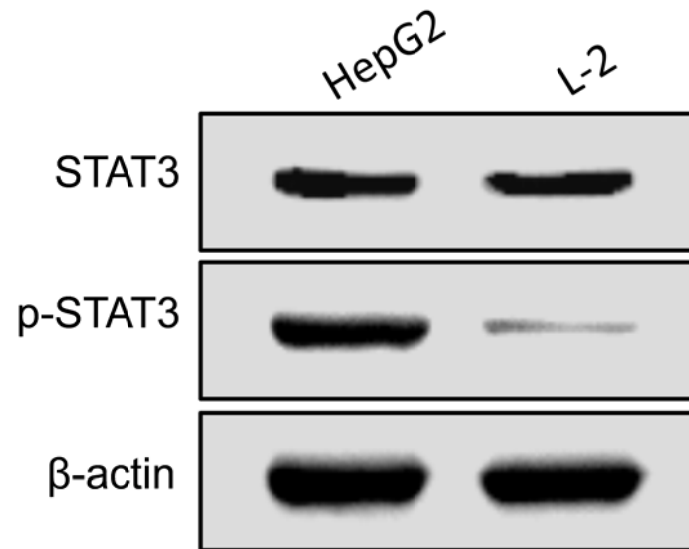


Figure S2. Western blotting showing the protein expression levels of phosphorylated STAT3 and STAT3 in HepG2 and L-2 cell lines.

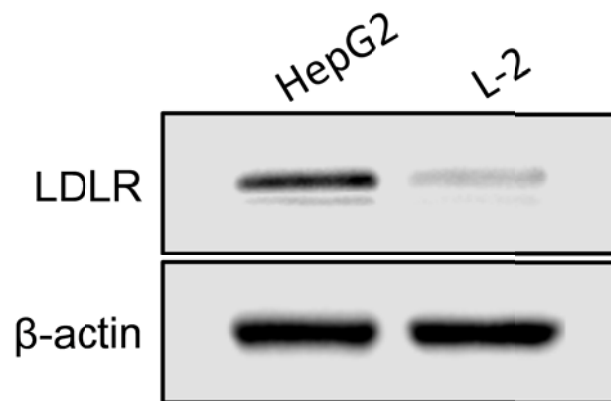


Figure S3. Western blotting showing the protein expression levels of LDL receptors in HepG2 and L-2 cell lines.

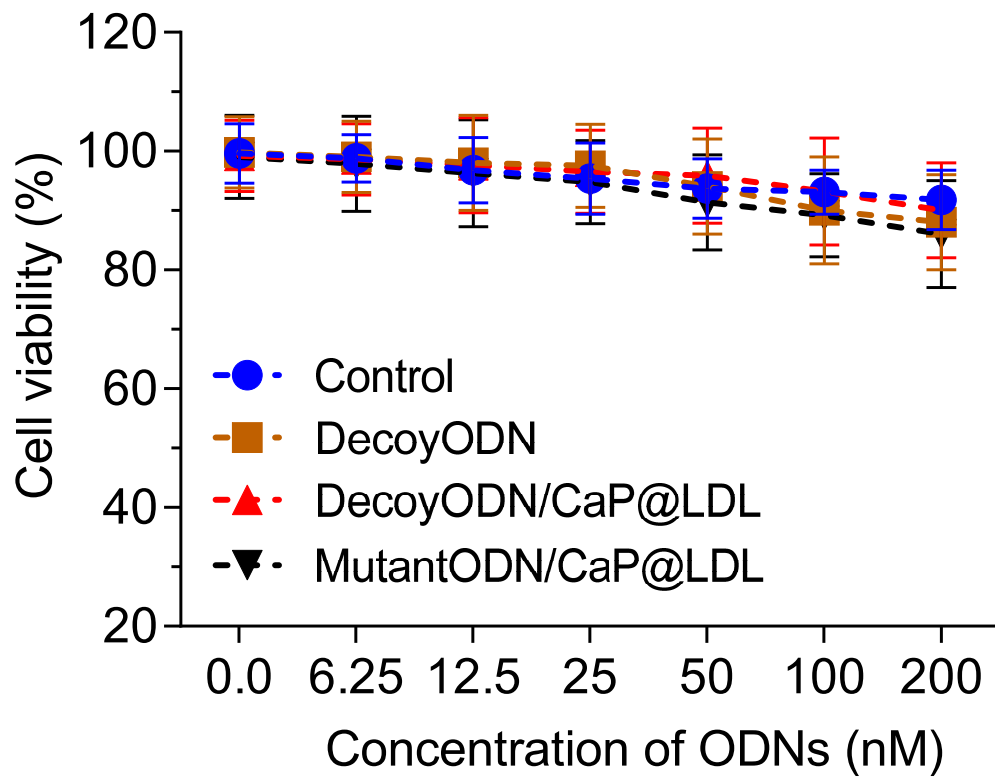


Figure S4. Cytotoxicity in L-2 normal cell line (n=6).

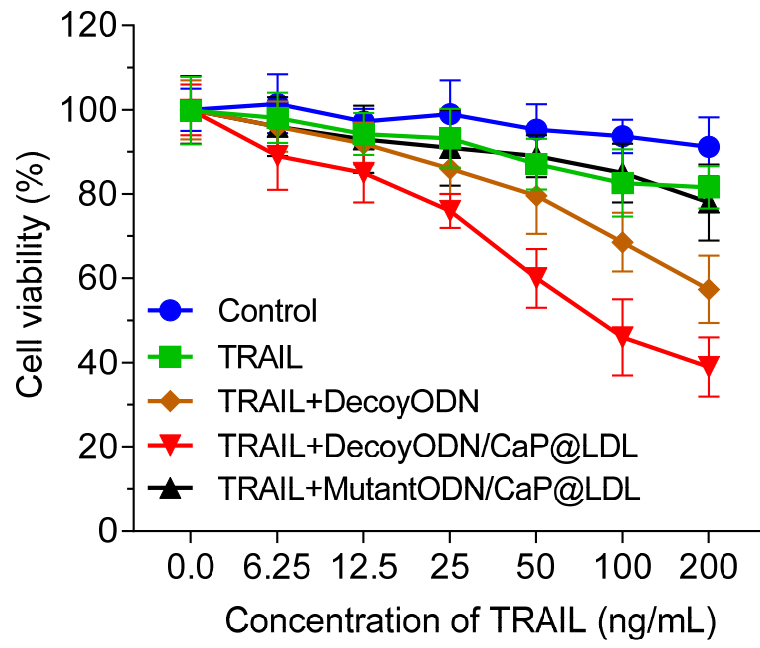


Figure S5. Cytotoxicity of TRAIL plus STAT3-decoy ODNs in PLC/PRF/5 cell line (n=6)

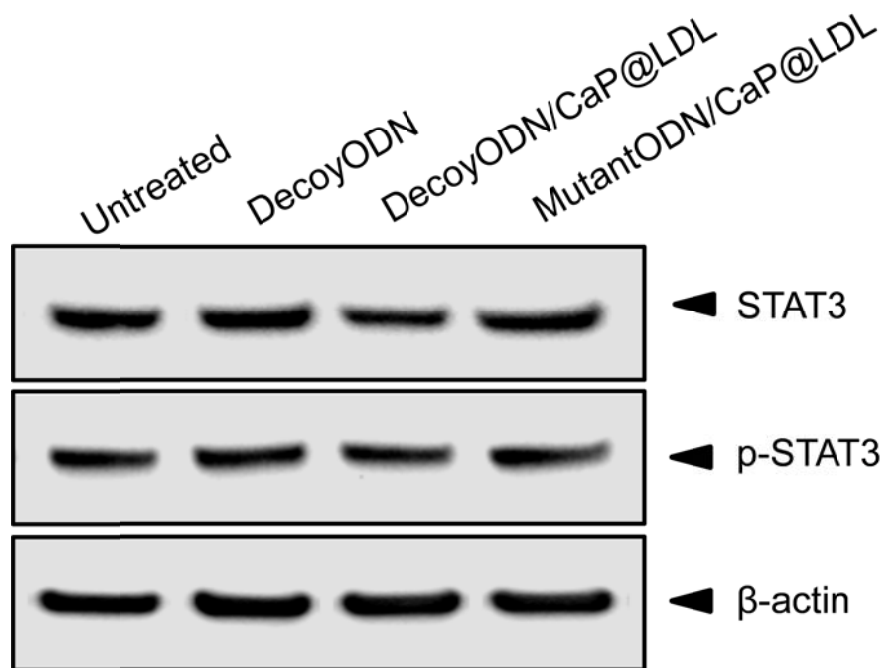


Figure S6. Changes of protein expression levels of phosphorylated STAT3 and STAT3 in tumor cells after treatment with different ODNs formulations.

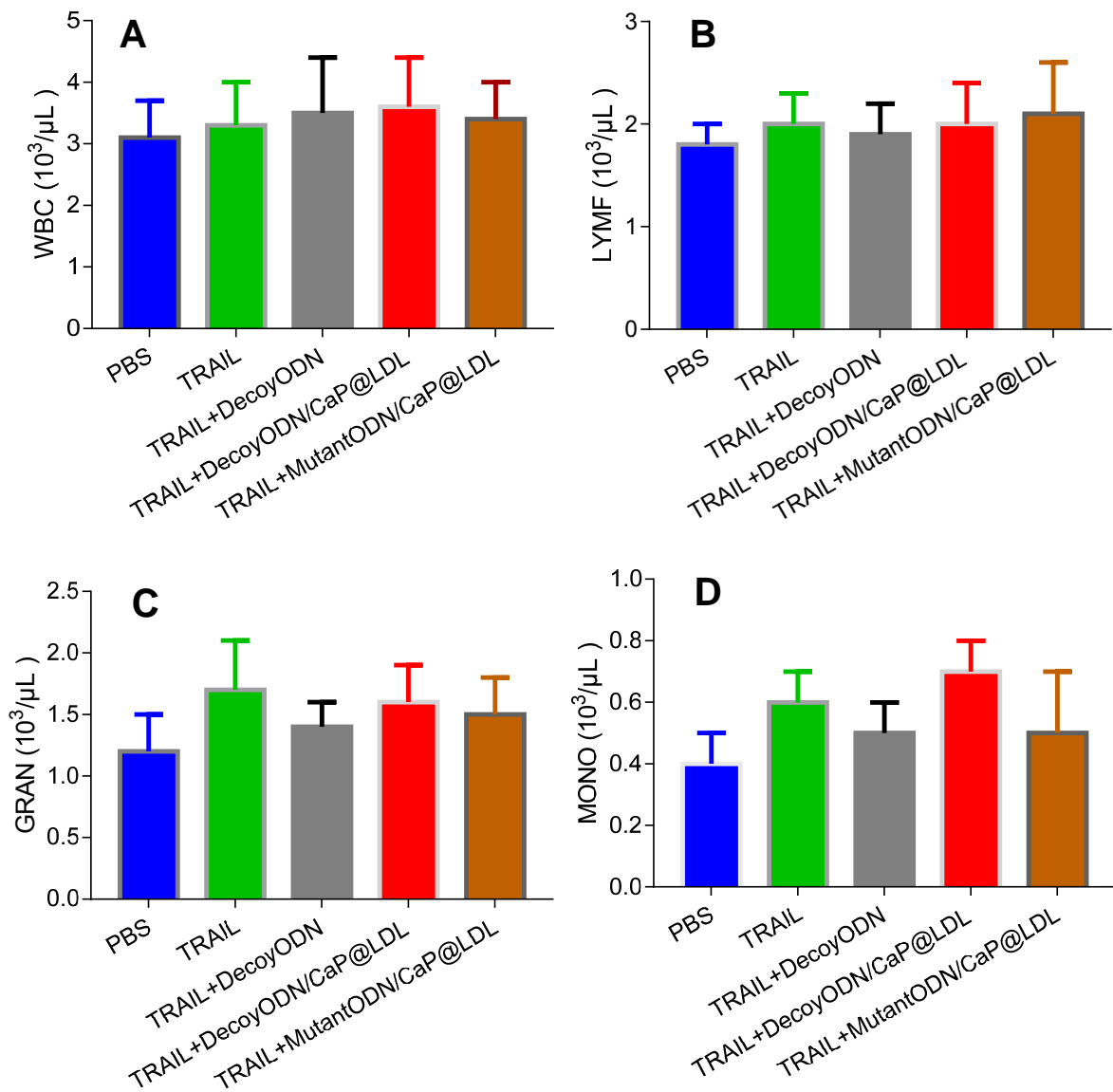


Figure S7. Hematology test of whole blood. (A) White blood cells (WBC), (B) lymphocytes (LYMF), (C) granulocytes (GRAN) and (D) monocytes (MONO) were counted for the detection of myelosuppression. Data are expressed as mean \pm S.D., n=5.