Supporting Information

Regulation of inflammatory response of macrophages and induction of regulatory T cells by using retinoic acid-loaded nanostructured lipid carrier

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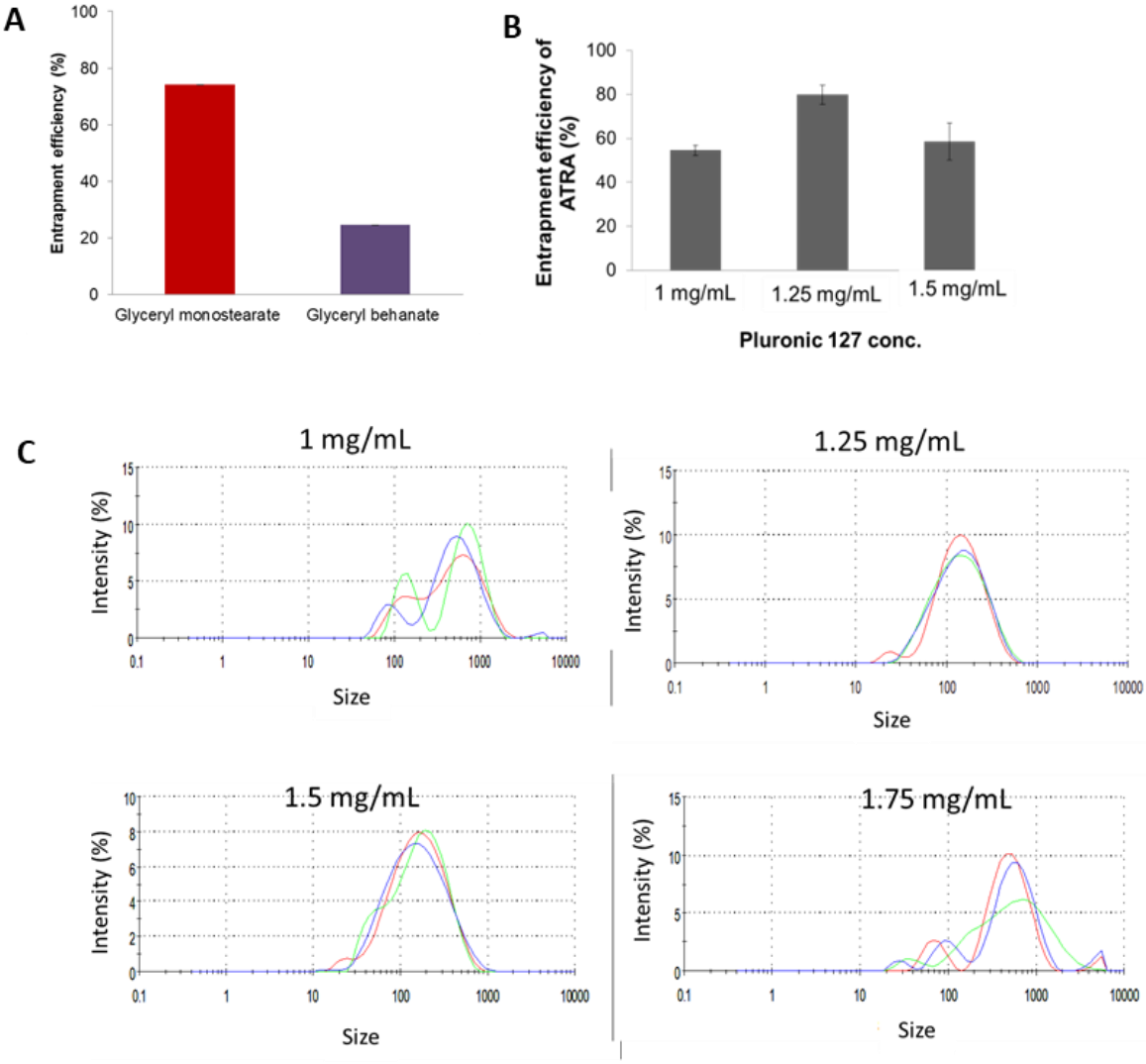
Table S1. Primer sequences of qPCR.

Transcript	**Forward primer**	**Reverse primer**
IL-1β	5'-GCAACTGTTCCTGAACTCAACT-3'	5'-ATCTTTTGGGGTCCGTCAACT-3'
IL-6	5'-CCACTTCACAAGTCGGAGGCTTA-3'	5'-CCAGTTTGGTAGCATCCATCATTTC-3'
TNF-α	5'-ACCCTCACACTCAGATCATCTTC-3'	5'-TGGTGGTTTGCTACGACGT-3'
GAPDH	5'-CCCAGCAAGGACACTGAGCAAG-3'	5'-GGTCTGGGATGGAAATTGTGAGGG-3'

Table S2. Concentration of each component in the obtained aqueous dispersion of NLC-RA.

Component	Concentration (mg/mL)
ATRA	0.015
GMS	1.25
Tocopherol	0.08
PC	0.16
PS	0.04
Pluronic F127	1.25
Ascorbic acid	0.42



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Total phospholipids (mg)	Size (nm)	Polydispersity index
20	206.3 ± 1.94	0.25 ± 0.01
5	152.5 ± 7.186	0.25 ± 0.01

Figure S1. Optimization of formulation of NLC-RA. Effect of matrix lipid on the entrapment efficacy of ATRA (A). Effect of Pluoronic 127 concentration on the entrapment efficacy of ATRA (B) and size distribution (C). Effect of total amount of phospholipids (PC + PS) on the size and polydispersity index (D).

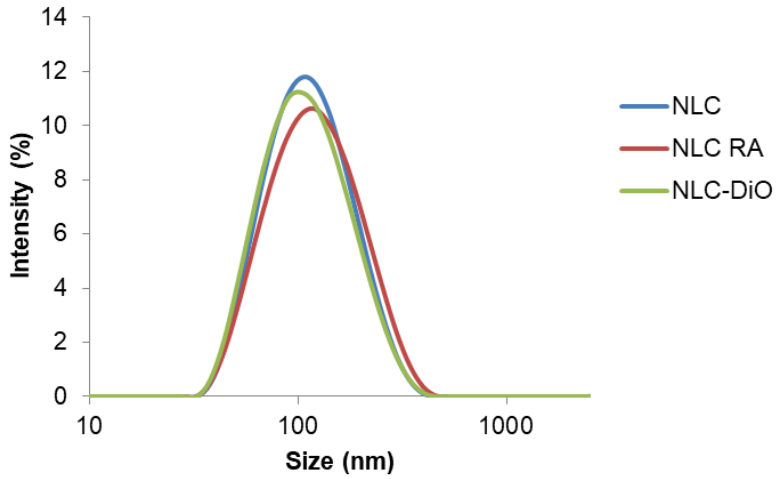

Figure S2. Size distribution of each nanoparticle in 10 mM HEPES (pH 7.4).

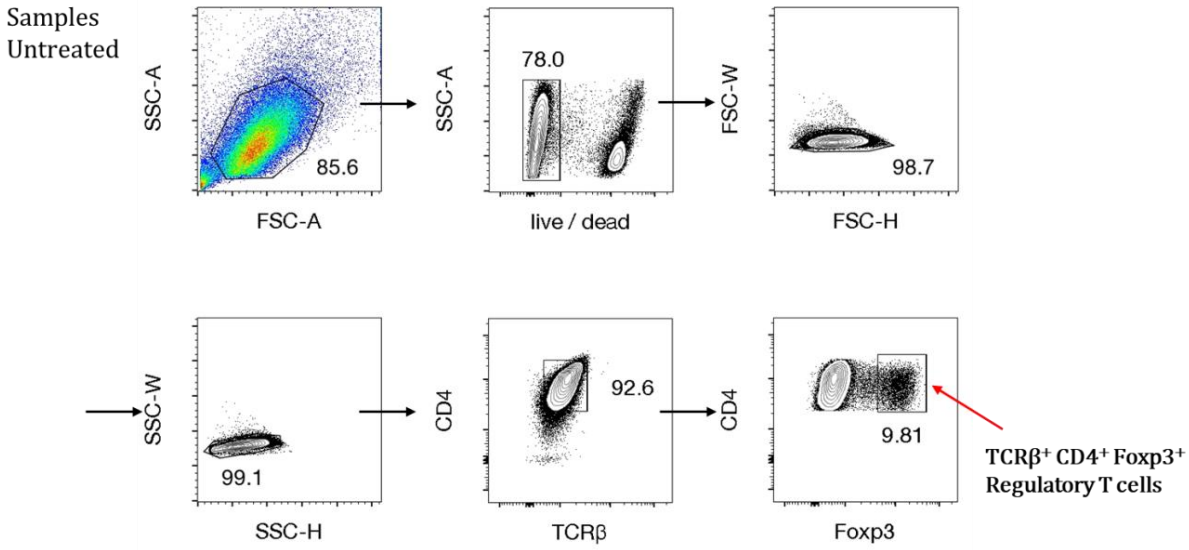

Figure S3. Procedure of identification of regulatory T cells in co-culture system.