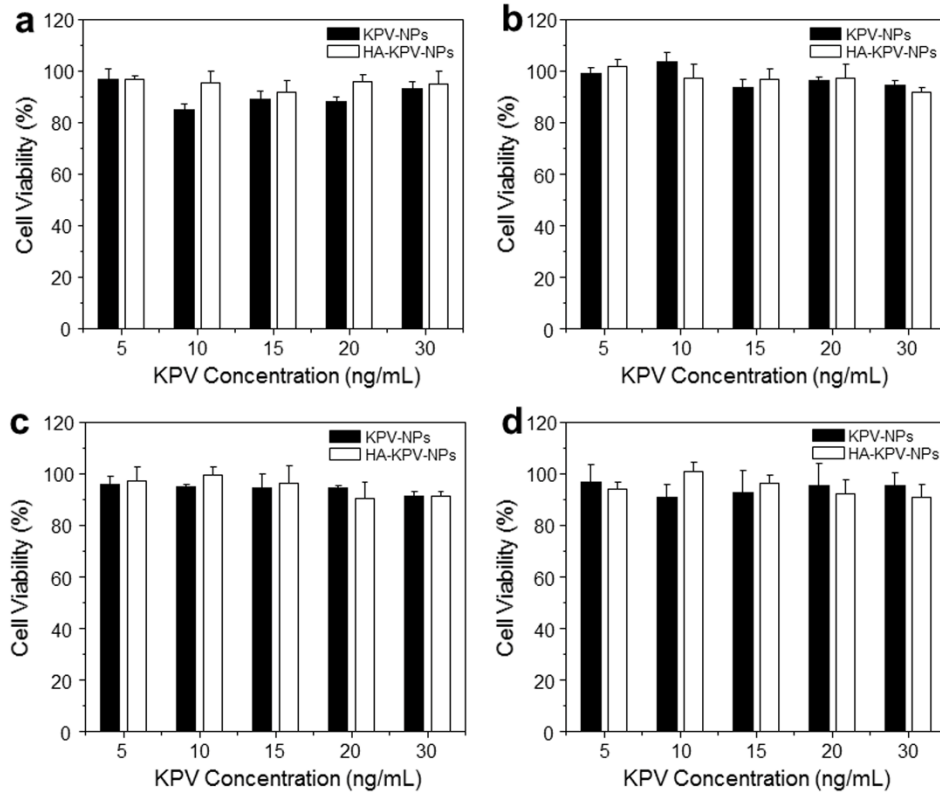


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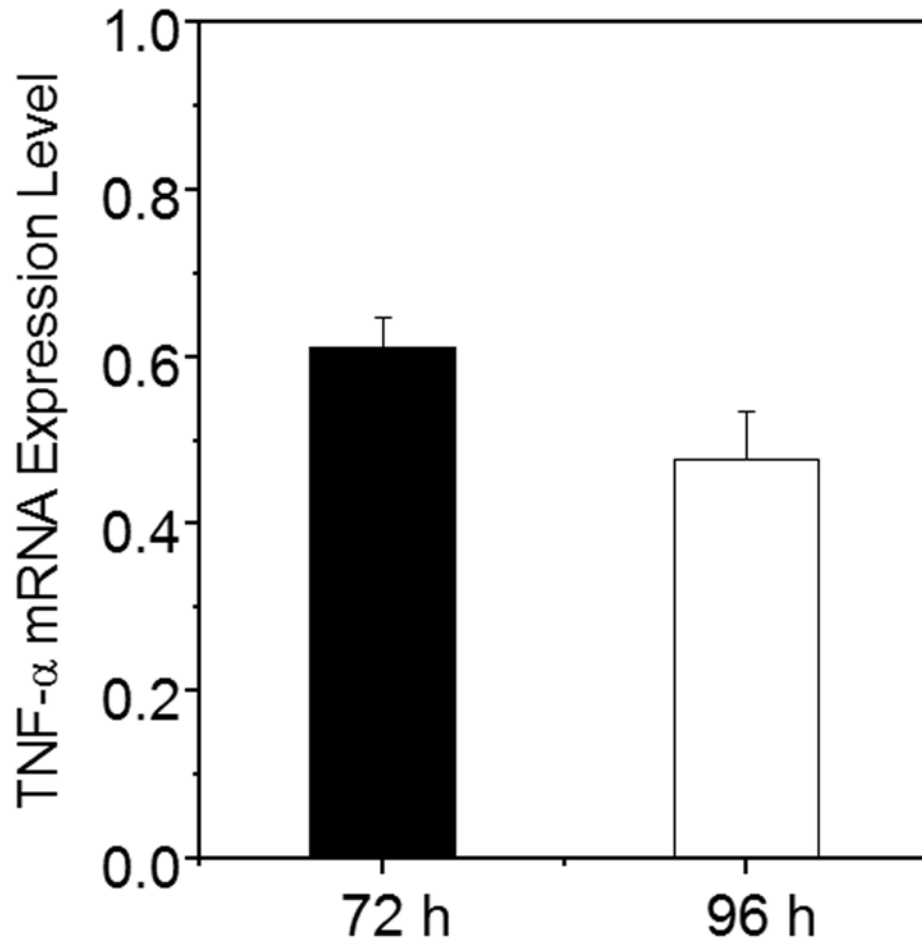
## **Supplemental Information**

### **Orally Targeted Delivery of Tripeptide KPV via Hyaluronic Acid-Functionalized Nanoparticles Efficiently Alleviates Ulcerative Colitis**

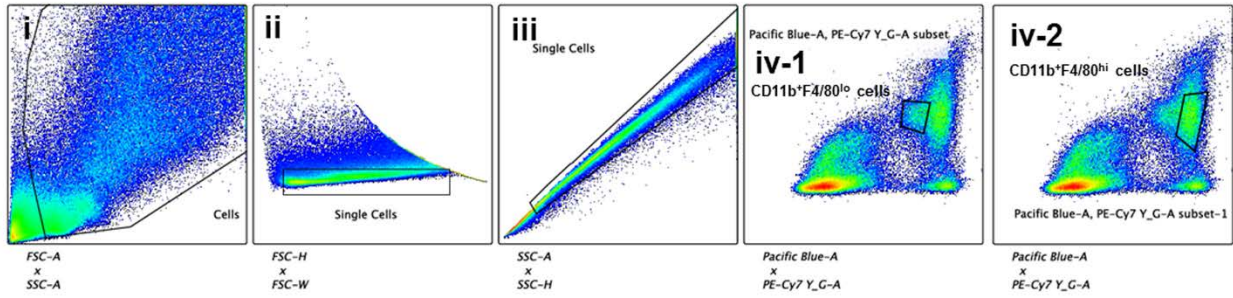
**Bo Xiao, Zhigang Xu, Emilie Viennois, Yuchen Zhang, Zhan Zhang, Mingzhen Zhang, Moon Kwon Han, Yuejun Kang, and Didier Merlin**



**Figure S1. *In vitro* cytotoxicity assays of KPV-NPs and HA-KPV-NPs against (a) Colon-26 cells for 24 h, (b) Raw 264.7 macrophages for 24 h, (c) Colon-26 cells for 48 h and (d) Raw 264.7 macrophages for 48 h.** Triton X-100 was used as the positive control to produce a maximum cell death rate (100%). Cell culture medium was used as a negative control (death rate defined as 0%). Toxicity is given as the percentage of viable cells remaining after treatment. Each point represents the mean  $\pm$  S.E.M. (n=5). Statistical significance was assessed using Student's *t*-test (\* $P$ <0.05 and \*\* $P$ <0.01).



**Figure S2.** TNF- $\alpha$  mRNA expression levels in Raw 264.7 macrophages treated by HA-KPV-NPs for 72 h or 96 h. Each point represents the mean  $\pm$  S.E.M. (n=3).



**Figure S3. Representative dot plots showing FCM gating processes to get macrophages (CD11b<sup>+</sup>F4/80<sup>lo</sup> and CD11b<sup>+</sup>F4/80<sup>hi</sup>) from mice treated with DSS and gavaged CM-loaded NPs.**

**Table S1. Primers used in this study.**

Primer name	Sequence	Description
TNF- $\alpha$ -F	5'-AGGCTGCCCCGACTACGT-3'	Tumor necrosis factor gene RT-PCR forward primer
TNF- $\alpha$ -R	5'-GACTTTCTCCTGGTATGAGATAGCAAA-3'	Tumor necrosis factor gene RT-PCR reverse primer
36B4-F	5'-TCCAGGCTTTGGGCATCA-3'	36B4 gene RT-PCR forward primer
36B4-R	5'-CTTTATCAGCTGCACATCACTCAGA-3'	36B4 gene RT-PCR reverse primer