Supplementary materials

Figure S1. The particle size and protein composition of tea NPs obtained after Chromatographic separation. A: Chromatographic separation of NPs from black tea infusion by SEC. B: Reducing SDS-PAGE images of black tea NPs. C: The particle size distribution of NPs from the black tea infusion. D: The morphology of tea NPs by TEM.

Figure S2. The expression of cell junction proteins in correspondence to intestinal inflammations. The proteins include E-cadherin, ZO-1, Claudin-1, STAT3 and p-STAT3.

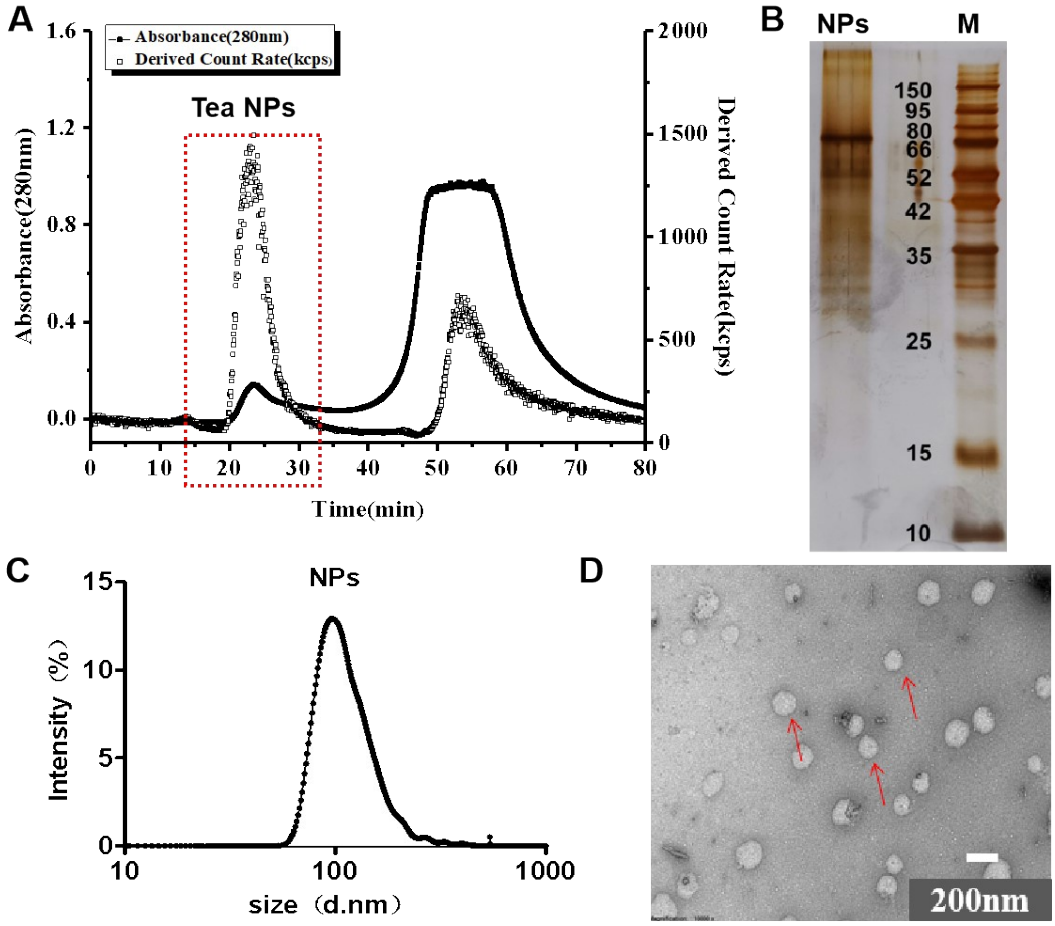

Figure S1

TABLES

Table S1. (a) The properties of black tea NPs

Sample	PDI	Hydrodynamic Diameter	Derived count rate	ζ-potential	Particle number
		nm	kcps	mV	$\times 10^{10}$ particles/mg
NPs	0.2±0.01	187±7	12850±576	-32.4±2.5	4.0±0.1
Tea infusion	0.2±0.02	186±4	3614±96	-27.5±3.7	1.1±0.1

(b) Compositions of nanoparticles derived from black tea infusion

Black tea NPs	Proteins	Carbohydrates	Polyphenols	EGCG	CAF	GA	ECG
(μg/mg)	865±52.5	87±5.2	48±1.1	4.8±0.1	2.6±0.1	1.5±0	0.7±0
%	86.5	8.7	4.8	0.48	0.26	0.15	0.07

%: W/W, dry weight.

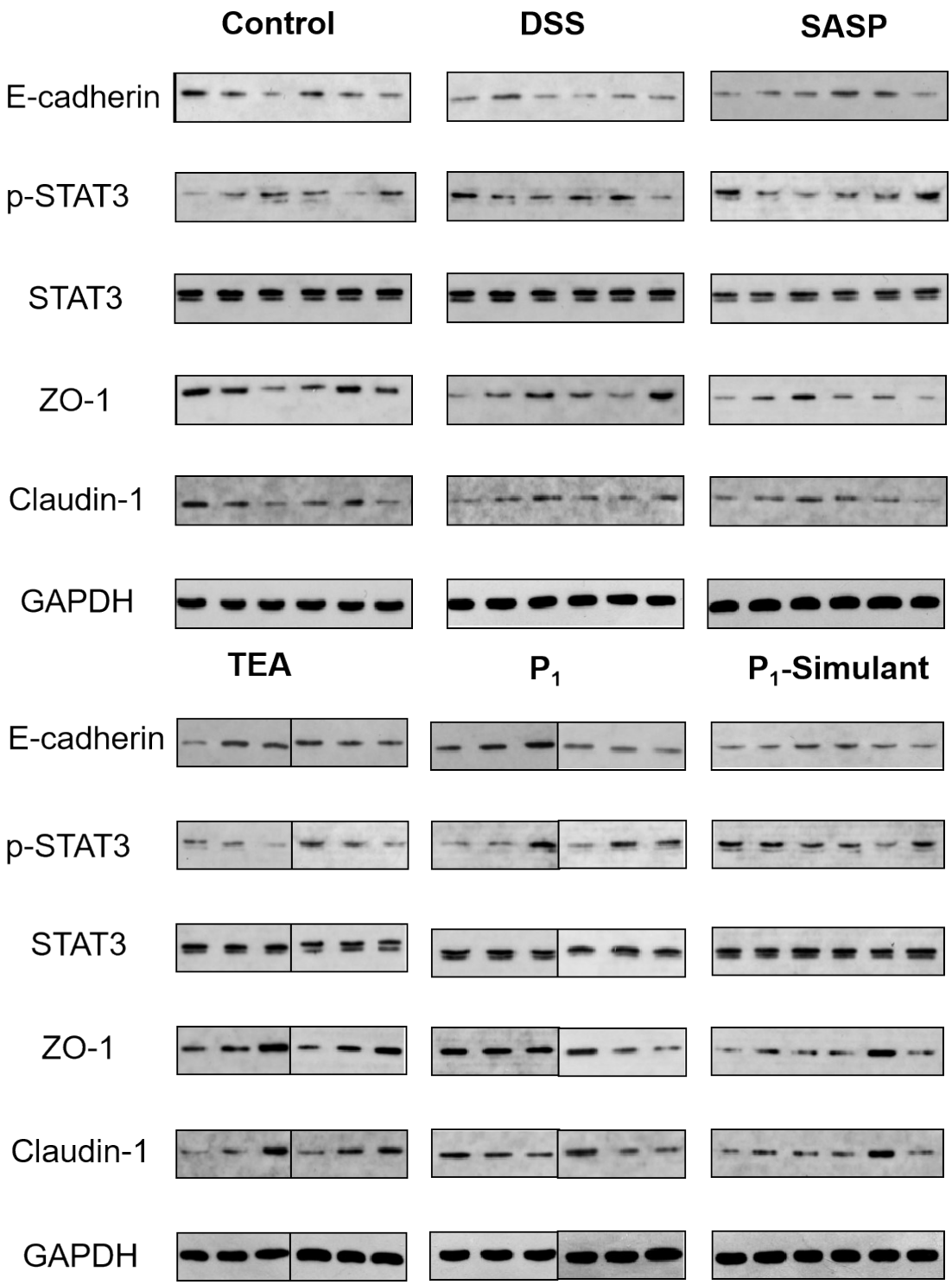
Control
DSS
SASP
E-cadherin
p-STAT3
STAT3
ZO-1
Claudin-1
GAPDH
TEA
P1
P1-Simulant
E-cadherin
p-STAT3
STAT3
ZO-1
Claudin-1
GAPDH

Figure S2