

## Supplementary Materials

### Gene Sequences of diannexin:

ATGGAGACAGACACACTGCTGCTGTGGGTGCTGCTGCTCTGGGTCCCCGG  
CAGCACCGGCGACGCCAAGTGCTGAGGGGCACAGTCACCGACTTTCCCG  
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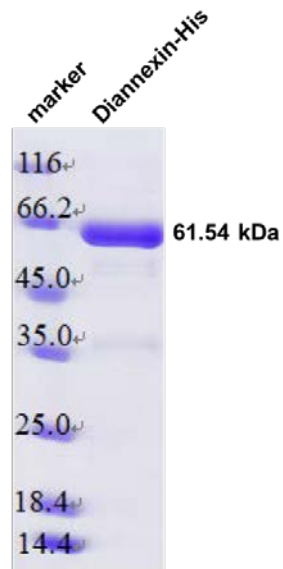


Fig S1 The image of the Coomassie Blue-stained SDS-PAGE gel showed that the size of diannexin-his synthesized was about 62 kDa, purity of the protein is 95.4% estimated by densitometric analysis.

Table S1 Clinical characteristics of the study participants

	Healthy pregnancy (n=14)	Preeclampsia (n=24)	P value
Age (years)	33 (29-36)	33 (28-35)	0.457
BMI before pregnancy (kg/m <sup>2</sup> )	24.5 (21.6-26.5)	22.5 (19.0-24.2)	0.079
Parity			0.199
Primipara	7 (50%)	7 (29.2%)	
Multipara	7 (50%)	17 (70.8%)	
Systolic blood pressure (mmHg)	122 (112-128)	155 (147-170)	<0.001
Diastolic blood pressure (mmHg)	79 (66-81)	99 (94-110)	<0.001
Proteinuria (g/24h)	<0.3	7.53 (3.08-12.88)	<0.001
Gestational age at birth (weeks)	39 (38.5-39.8)	31.2 (28.2-33.2)	<0.001
Weight of neonate (g)	14 (100%)	23 (95.8%)	
<1000	0	5 (20.8%)	
1000-1499	0	7 (29.2%)	
1500-2499	1 (7.2%)	9 (37.5%)	
2500-4000	10 (71.4%)	2 (8.3%)	
>4000	3 (21.4%)	0	
Gestational age of collecting samples (weeks)	32.3 (30.1-33.4)	31.1 (30.4-32.3)	0.081

Except for parity and weight of neonate presented with percentile, other clinical data were showed in the formation of median (interquartile range). BMI: body mass index.

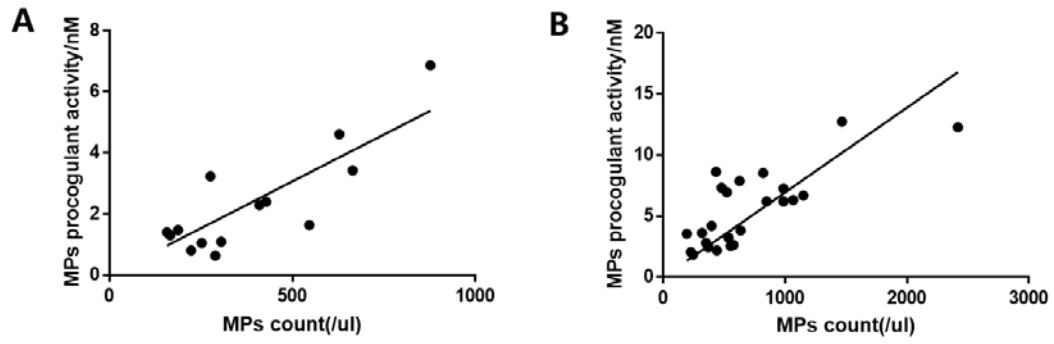
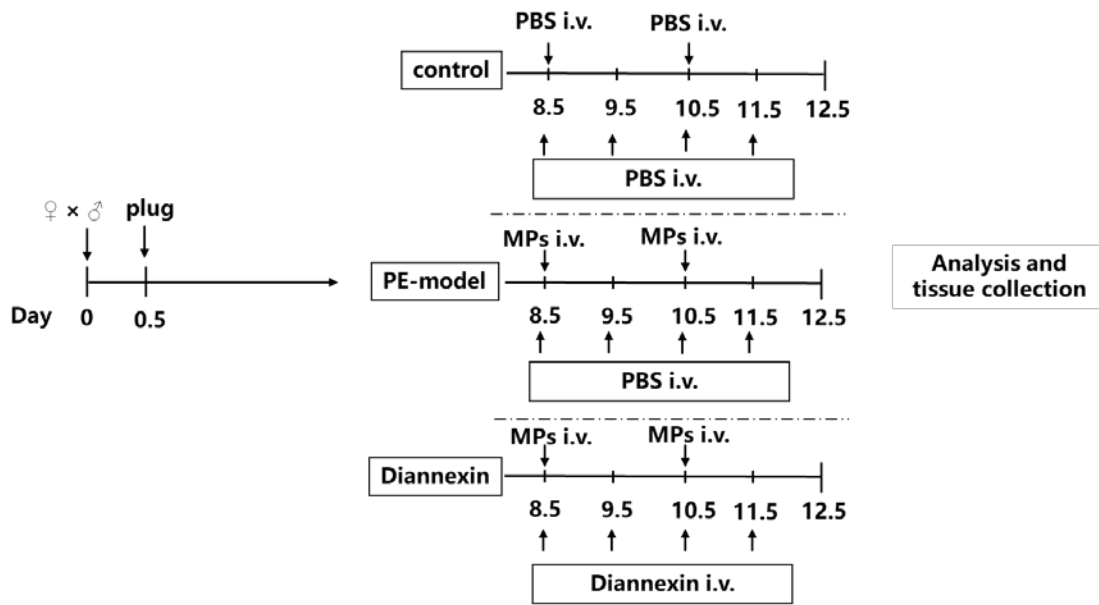


Figure S2. The correlation between the number of microparticles (MPs) and their procoagulant activity in healthy controls (A) and PE women (B). According to line regression model, the regression coefficient is 0.00613 for healthy pregnant women and 0.00694 for PE women, respectively.

**A**



**B**

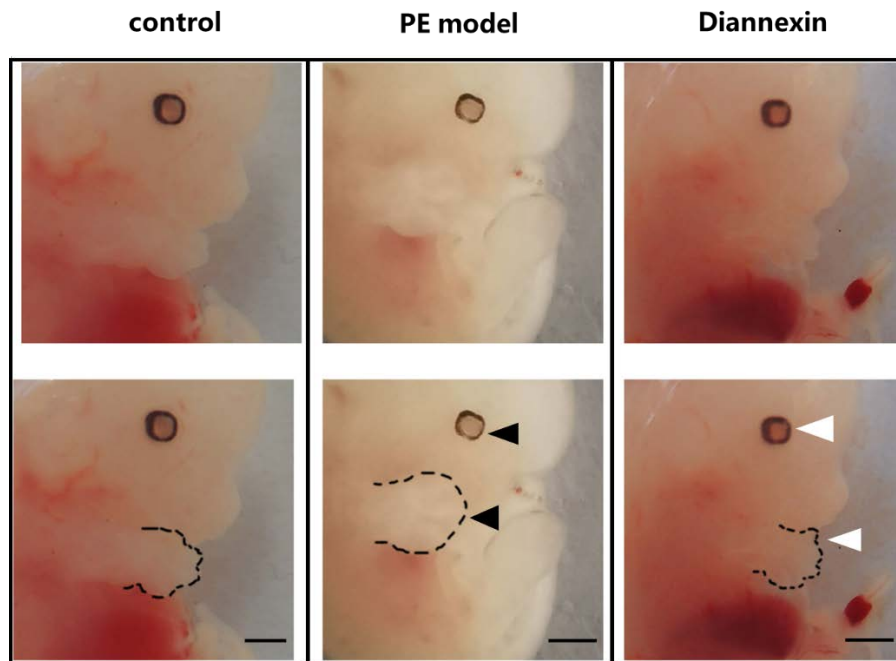


Figure S3. The flow chart of *in vivo* experiment and high magnification images of embryos at 12.5 p.c.. A. Flow chart reflecting treatment procedure of three groups. B. Dark arrows showed impaired forelimb and reduced retinal pigmentation in PE-model group. White arrows showed the development of the embryos improved after diannexin treatment. Bar represents 1 cm.

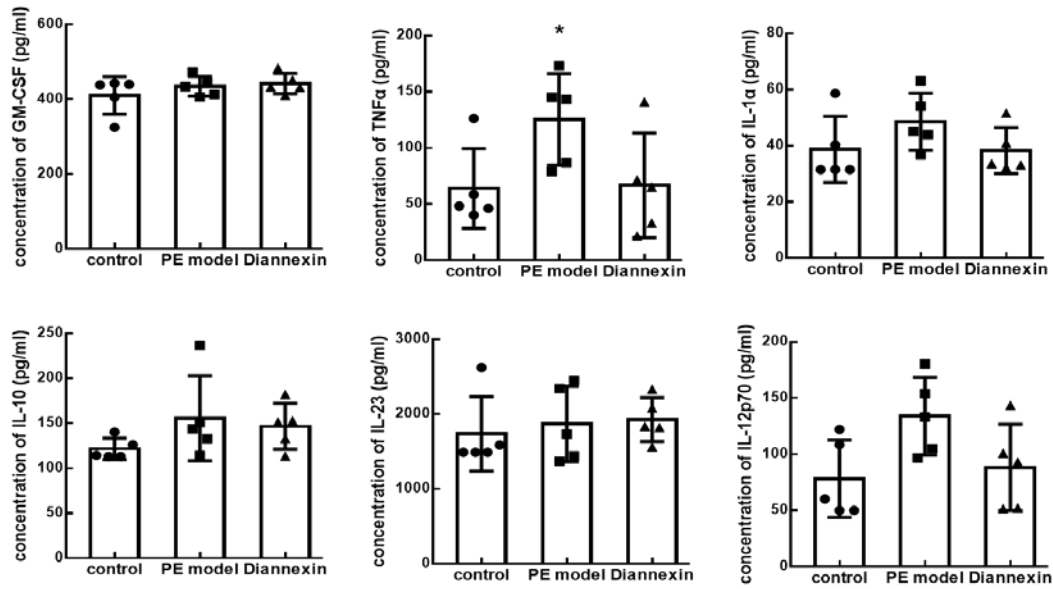


Figure S4. The concentration of cytokines (GM-CSF, TNF $\alpha$ , IL-1 $\alpha$ , IL-10, IL-23 and IL-12p70) from serum of the control, PE-model group and diannexin-treated group. \* $P < 0.05$  for comparisons between control and PE model group; # $P < 0.05$  for comparisons between PE-model group and diannexin-treated group. Student's  $t$  test was performed.

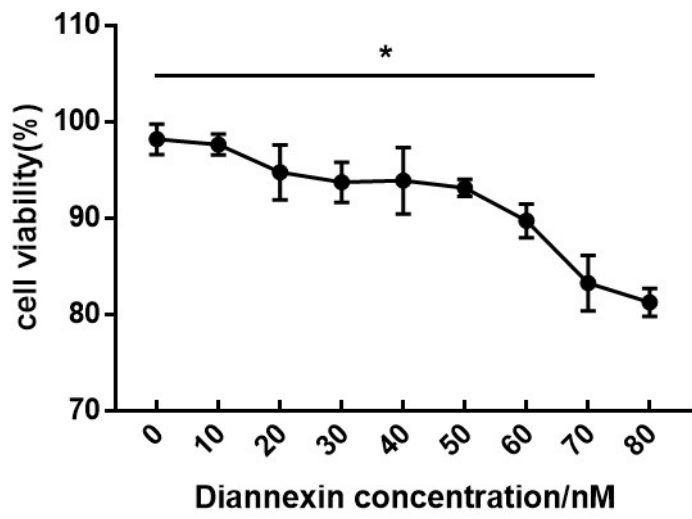


Figure S5. The cell viability in different concentrations of diannexin. It showed that diannexin did not influence the cell viability until the concentration of 70 nM. \* $P < 0.05$ .



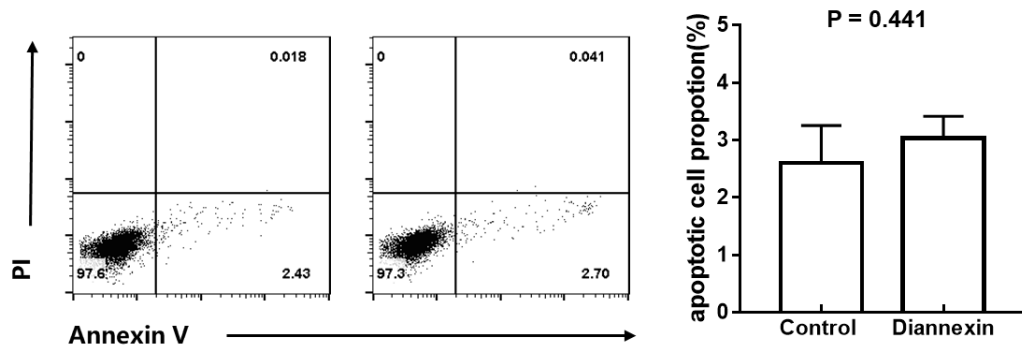


Figure S6. Apoptosis detection showed that diannexin at a 40 nM concentration did not result in cell apoptosis