Supplemental Materials:

Supplemental Methods

Cell culture and treatment

For the analysis of MMP2 and MMP9 enzyme activities, HK2 cell cultures at 70% confluence were synchronized under serum-free conditions for 4 h. The HK2 cells under the serum-free condition were then treated with IS or PCS at concentrations of 0, 1, 5, and 50 mg/L for 96 h. The culture medium was collected for western blotting and MMP activity assay. Starved HK2 cells treated with recombinant EGF (0.1, 1, 10 ng/mL) were used as positive controls.

For the studies of co-treatment with EGF, starved HK2 cells were treated with IS/PCS and recombinant EGF (Sigma-Aldrich) at a concentration of 1ng/mL for 24 h. For the albumin competition studies, starved HK2 cells were treated with IS/PCS (0 and 5 mg/L) and human serum albumin (Sigma-Aldrich) (0, 0.05, 0.5 and 5 %) for 24 h.

MMP2 and MMP9 enzyme activity assay

The MMP2 and MMP9 enzyme activities in the culture medium were measured by fluorogenic method (InnoZyme™ Gelatinase (MMP-2/MMP-9) Activity Assay kit, Merck KGaA, Darmstadt, Germany).[1] The assay was performed according to the product instruction. Briefly, cultured medium (100 μL) were diluted in activation

buffer (1:3, v/v), and incubated for 3 h with thiopeptide substrate specific for type IV collagenases (MMP2 and MMP9). The released fluorescence of the cleaved substrate of MMP2 and MMP9 (ex: 320 nm; em: 405 nm) was monitored by fluorimetry (SpectraMax M3, Molecular Devices, LLC). Triplicate tests were performed for each reaction. The relative fluorescence unit ratios (*vs*. control) were plotted.

Supplemental Reference:

1. Gupta S1, Silva TS, Osizugbo JE, Tucker L, Spratt HM, Garg NJ: Serum-Mediated Activation of Macrophages Reflects TcVac2 Vaccine Efficacy against Chagas Disease. *Infect Immun* **82**:1382-1389. 2014

Supplemental Figure Legends

Supplemental Figure 1. IS and PCS increased MMP2 and MMP9 enzyme activities *in vitro*. (A) Western blotting results for MMP2 and MMP9 in culture medium of HK2 cells after 96-hour treatment with IS, PCS and EGF. (B) Results of MMP2 and MMP9 enzyme activity assay in culture medium of HK2 cells after 96-hour treatment with IS, PCS and EGF. (RFU: relative fluorescence units)

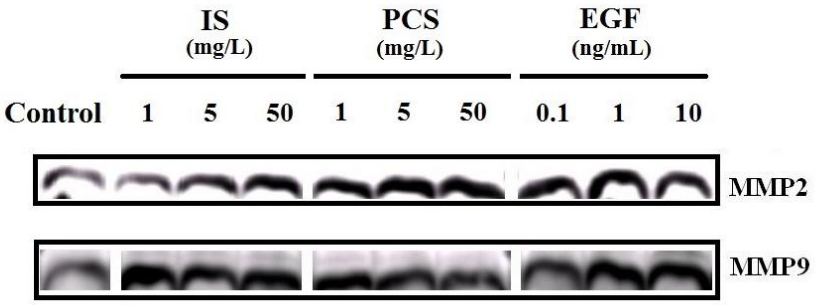
Supplemental Figure 2. Synergic effects of IS and PCS on EGFR activation by EGF. Western blotting results for EGFR, EGFR-p, MMP2 and MMP9 in HK2 cells after 24-hour treatment with EGF (1ng/mL) in the presence or absence of IS/PCS (1, 5 and 50 mg/L).

Supplemental Figure 3. Serum albumin attenuated the EGFR activation by IS and PCS *in vitro*. Western blotting results for EGFR, EGFR-p, MMP2 and MMP9 in HK2 cells after 24-hour treatment with IS/PCS (5mg/L) in the presence or absence of human serum albumin (0.05, 0.5 and 5 %).

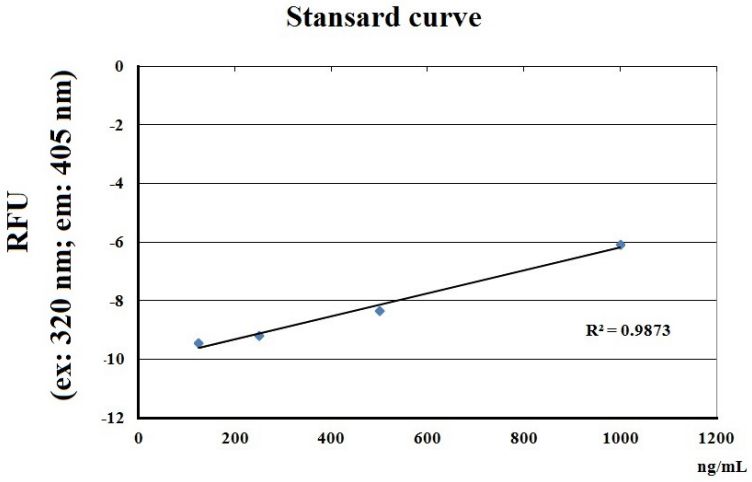
Supplemental Figures:

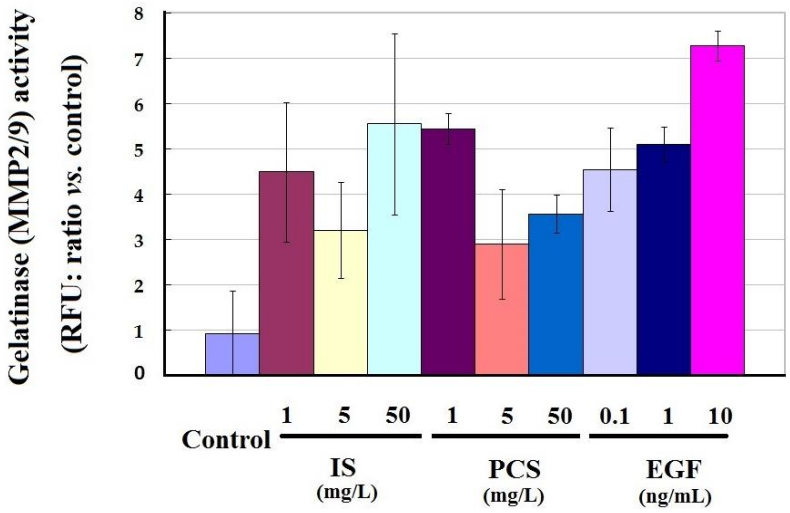
Supplemental Figure 1.

A

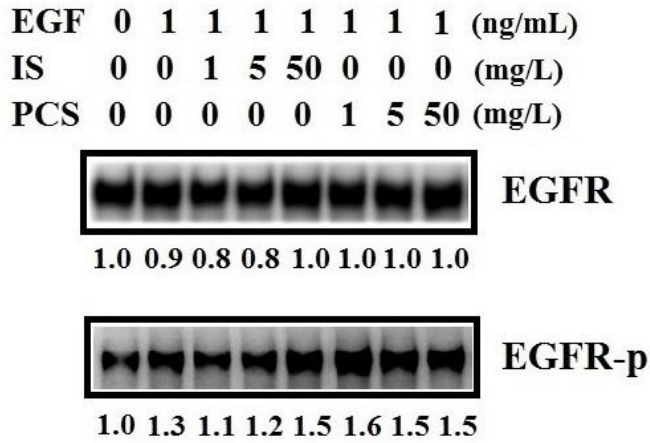


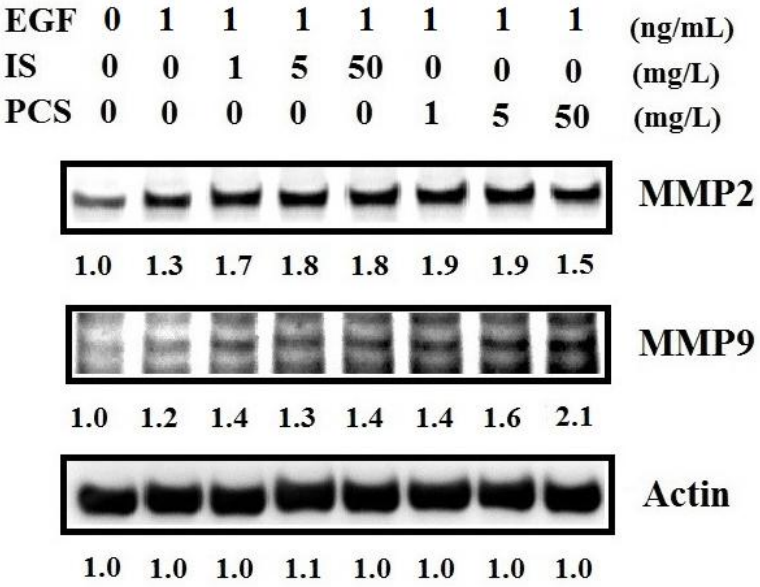
B





Supplemental Figure 2.





Supplemental Figure 3.