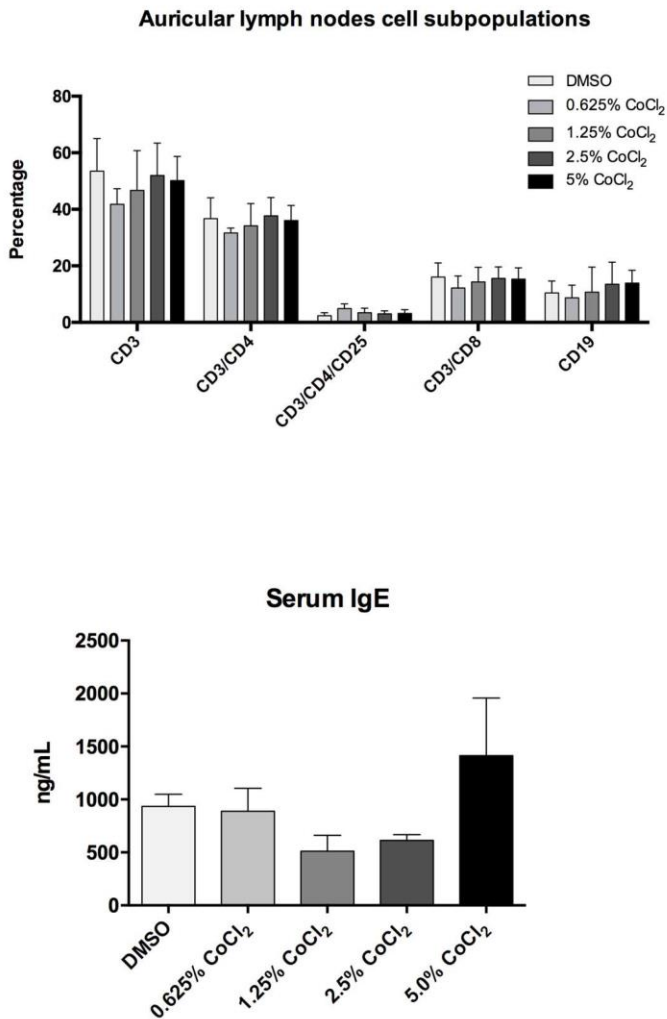


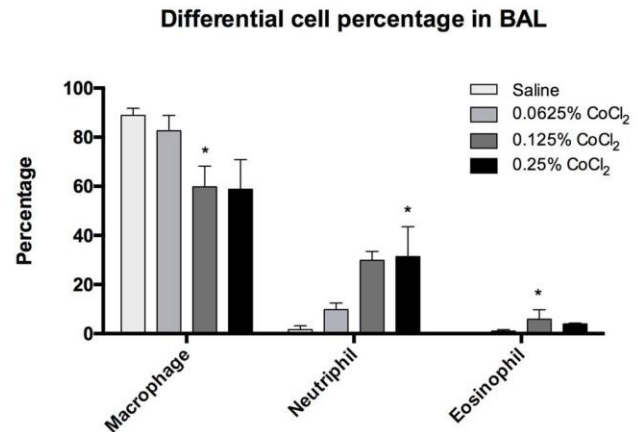
## Skin exposure

A)



## Respiratory challenge

B)



**Figure S1.** Results in preliminary test. **A)** In preliminary test of skin exposure, lymphocyte subpopulations in the auricular lymph nodes and serum IgE level were measured from DMSO vehicle, 0.625%, 1.25%, 2.5%, and 5% cobalt treated Balb/c mice 7 days after dermal sensitization.  $n=4-7$  per group. **B)** In preliminary test of respiratory challenge, differential cell count in bronchoalveolar lavage (BAL) were measured from four groups of saline, 0.0625%, 0.125%, 0.25%, and 0.5% cobalt treated Balb/c mice 24 h after one-time oropharyngeal challenge.  $n=3$  per group. Data are presented as mean  $\pm$  SD. \* $p<0.05$  compared to the vehicle control group.