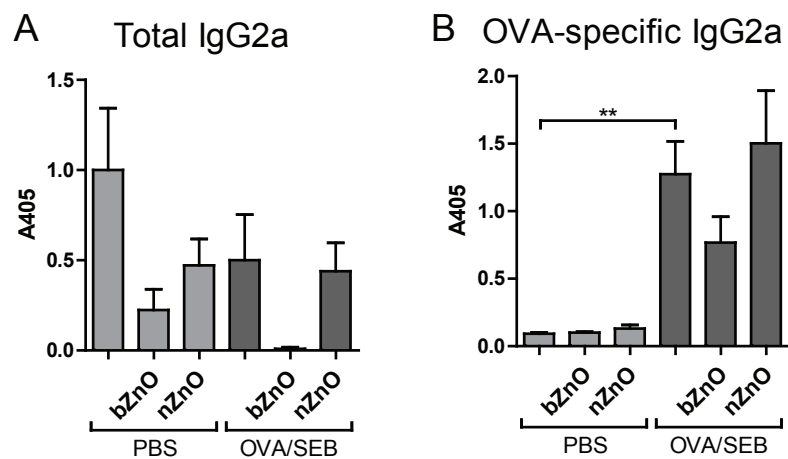




**Additional file 4.** Antibody levels in mice sera after repeated topical application of vehicle, different sized ZnO, and OVA/SEB with or without particle application. A. Total IgG2a values are showed as ratios compared to PBS-treated control and whereas B. OVA-specific IgG2a levels are showed as optical values measured at 405 nm. The columns and error bars represent means  $\pm$  SEM (n=8 mice /group). \*\* $P$ <0.01.