

**Supplementary Figure 1. Peanut-coated microneedles do not cause reactivity in peanut-sensitized mice.** Sensitized mice were treated with PBS, peanut (PN-EPIT), OVA-coated MNs (OVA-MN) or peanut-coated MNs (PN-MN). Mice were monitored for symptoms of allergic reactions following application of immunotherapy. (A) Temperature change was monitored for 120 minutes after application. (B) Mice were monitored for clinical symptoms of allergic reactions for 120 minutes after application with no symptoms noted. (C) Levels of MCPT-1 in the serum 60 min after application were determined by ELISA. N =10 mice/group. Data are presented as mean ± SEM.



**Supplementary Figure 2. Investigation of a time course of PN-EPIT in peanut-sensitized mice.** Sensitized mice were treated epicutaneously with PBS (sham) or peanut (PN-EPIT). PN-EPIT durations of 5, 8 and 12 weeks were tested. Mice were challenged orally with peanut and reactivity was determined following the final oral challenge. (A) Mice were monitored for clinical symptoms of allergic reactions for 60 minutes after challenge. (B) Temperature change was monitored for 60 minutes after application. (C) Levels of MCPT-1 in the serum 60 min after application were determined by ELISA. Data are presented as mean ± SEM. \*p < 0.05, \*\*p < 0.01 and \*\*\*p < 0.001



**Supplementary Figure 3. Quantification of peanut-specific IgE from IgG-depleted serum.** Serum pools were generated by combining samples collected at the end of the study. Two serum samples were combined to generate each sera pool. IgG was depleted from each sera pool, and peanut-specific IgE antibody titers were determined in the IgG-depleted serum. N=5 pools per group. Data are presented as mean ± SEM. \*p < 0.05 and \*\*p < 0.01.