**Supplementary Figure 1: Supplemental Methods.**

**Supplementary Figure 2: Ex Vivo T cell responses.** Cytokine production by activated (CD69+) T cells were assessed without *in vitro* stimulation prior to (0d) and either 7d, 14d, or 28d post-vaccination with 2010-2011 TIV. GMP ratios vs 0d were calculated for each time-point post-vaccination using repeated measures linear mixed models. A GMP ratio greater than 1 (line) is indicative of a higher post-vaccination response. T cell activation is expressed as CD4+CD69+ or CD8+CD69+ cells in total CD4+ or CD8+ T cells. Cytokine-producing cells are expressed as the percentage of total CD4+CD69+, or CD8+CD69+ T cells. Error bars represent 1 standard error. Significance is indicated by \* p ≤ 0.05, \*\* p ≤ 0.01, † p ≤ 0.001.

**Supplementary Figure 3: T cell responses to influenza rHA stimulation.** Cytokine production by activated (CD69+) T cells induced by pH1N1 or A/Perth/16 rHA stimulation was assessed prior to (0d) and either 7d, 14d, or 28d post-vaccination with 2010-2011 TIV. GMP ratios vs 0d were calculated for each time-point post-vaccination using repeated measures linear mixed models. A GMP ratio greater than 1 (line) is indicative of a higher post-vaccination response. T cell activation is expressed as CD4+CD69+ or CD8+CD69+ cells in total CD4+ or CD8+ T cells. Cytokine-producing cells are expressed as percent within total CD4+CD69+, or CD8+CD69+ T cells. Error bars represent 1 standard error. Significance is indicated by \* p ≤ 0.05, \*\* p ≤ 0.01, † p ≤ 0.001.