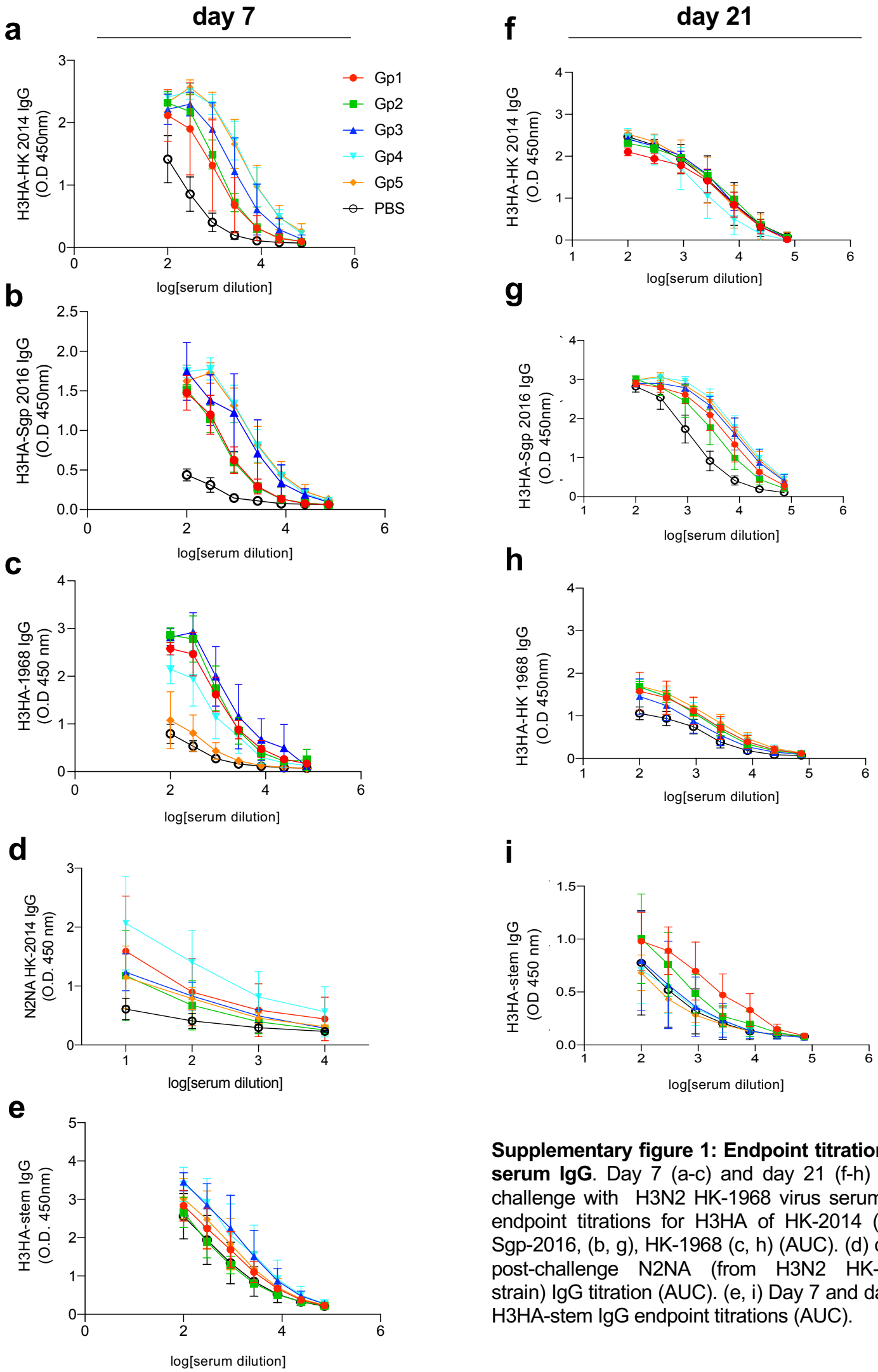
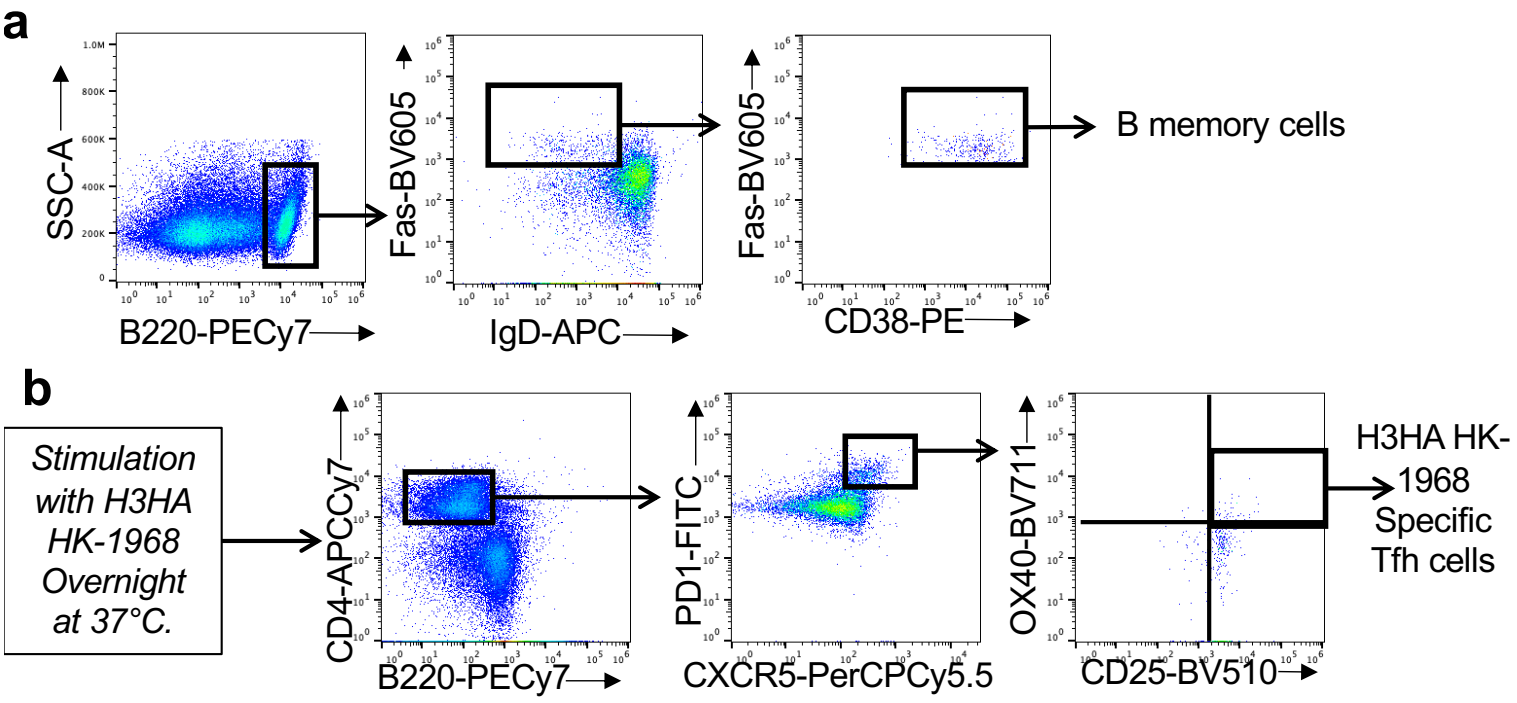
Supplementary table 1

Primer	**Forward (3' to 5')**	**Reverse (5' to 3')**
Blimp1	ATGGAGGACGCTGATATGAC	CCTTACTTACCACGCCAATAAC
CXCR4	TCAGTGGCTGACCTCCTCTT	CTTGGCCTTTGACTGTTGGT
CD21	TCTTCCTCTCCTTGCTACAGG	AGAAGAGGTGGGGACGTTCT



Supplementary figure 1: Endpoint titrations of serum IgG. Day 7 (a-c) and day 21 (f-h) post-challenge with H3N2 HK-1968 virus serum IgG endpoint titrations for H3HA of HK-2014 (a, f), Sgp-2016, (b, g), HK-1968 (c, h) (AUC). (d) day 7 post-challenge N2NA (from H3N2 HK-2014 strain) IgG titration (AUC). (e, i) Day 7 and day 21 H3HA-stem IgG endpoint titrations (AUC).



Supplementary figure 2. Representative gating strategy used for FACS analysis, with prior gating on FSC/SSC -> Live/dead. (a) B memory cells gating strategy (from Figure 3a). (b) H3HA HK-1968 specific T follicular helper cells (from Figure 5a).