

Supporting information

A self-adjuvanted, modular, antigenic VLP for rapid response to Influenza virus variability

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Size exclusion chromatography of SC-HA_{head} using Superose-6 column

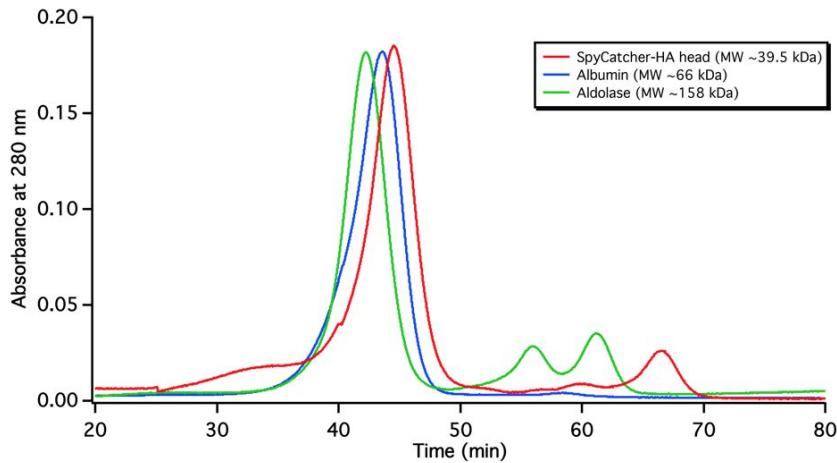


Figure S1: Size exclusion chromatography of SC-HA_{head} to assess the oligomeric state. The elution profile of SEC standards and SC-HA_{head} reveals that it exists in monomeric state in solution.

Detection of aggregates in SC-HA_{head} using Dynamic light scattering technique (DLS)

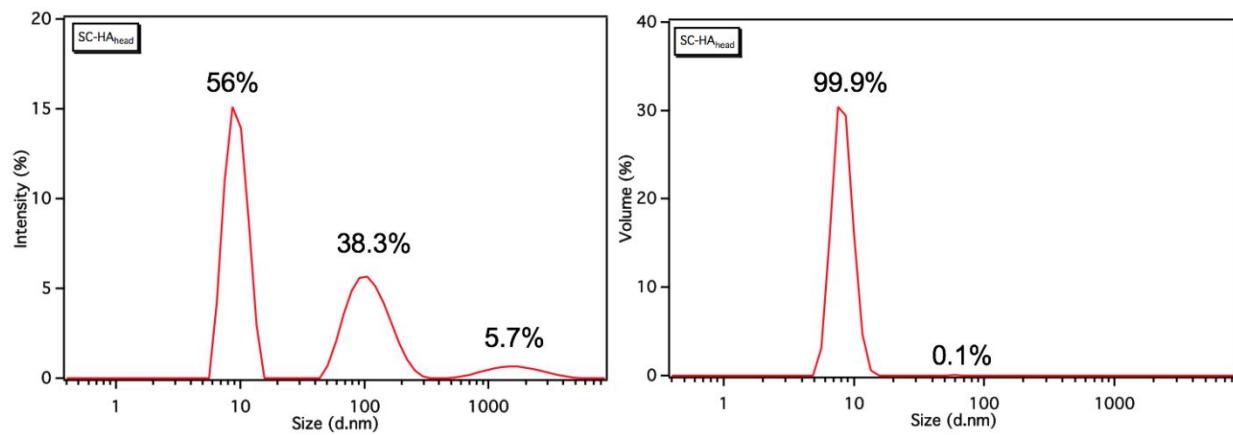


Figure S2: DLS analysis of the protein size distribution. Intensity distribution (left) showed the presence of large aggregates. However, the volume based distribution (right) showed one peak, suggesting that the majority of population (99.9%) has a diameter of 8.5 ± 0.2 nm.

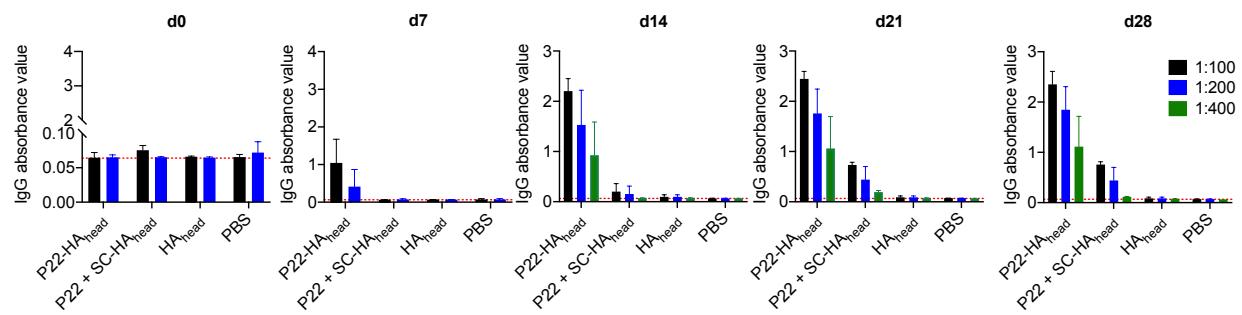


Figure S3. Dilution series for the total anti-HA IgG that was measured in serum at days 7, 14, 21 and 28 post-inoculation by ELISA.

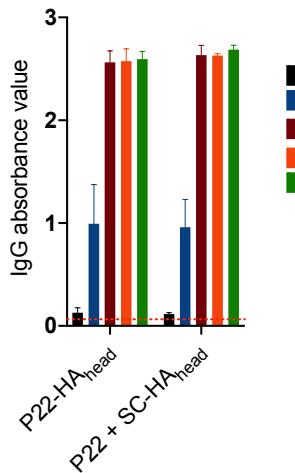


Figure S4. Total anti-P22 IgG was measured in serum at days 7, 14, 21 and 28 post-inoculation by ELISA. Representative 1:100 dilution shown.

SpyCatcher-HA head amino acid sequence (SC-HA_{head})

MGSSHHHHHGAMVDTLSGLSSEQGQSGDMTIEEDSATHIKFSKRDEDGKELAGAT
MELRDSSGKTISTWISDGQVKDFYLYPGKYTFVETAAPDGYEVATAITFTVNEQGQVT
VNGKATKGDAHIGSGGSGASKGIAPLQLGKCNIAGWLLGNPECDPLLPVRWSYIVE
TPNSENGLCYPGDFIDYEELREQLSSFERFEIFPKESSWPNHNTNGVTAACSHEGK
SSFYRNLLWLTEKEGSYPKLNSYVNKKGKEVLVLWGIHHPPNSKEQQNLYQNENA
YVSVVTTSYNRRFTPEIAERPKVRDQAGRMMYYWTLLKPGDTIIFEANGNLIAPMYA
FALSRGFSGSIITS

CP-SpyTag amino acid sequence (CP-ST)

MALNEGQIVTLAVDEIIETISAITPMAQKAKKYTPPAASMQRSSNTIWMPVEQE
SPTQEGWDLTDKATGLLELNVAVNMGEPDNDFFQLRADDLRDEAYRRRIQS
AARKLANNVELKVANMAAEM GSLVITSPDAIGTNTADAWN FVADAEEIMFSR
ELNRDMGTSYFFNPQDYKKAGYDLTKRDIFGRIPPEAYRDGTIQRQVAGFDDVL
RSPKLPVLT KSTATGITVSGAQSFKPVAWQLDNDGNKVNVDNRFATV TLSATT
GMKRGDKISFAGVKFLGQMAKNVLAQD ATFSVV RVVDGTHVEITPKPVALDD
VSL SPEQRAYANVNTSLADAMAVNLNVKDARTNVFWADD AIRIVSQPI PANH
ELFAGMKTTSFSIPDVGLNGIFATQGDISTLSGLC RIALWYGVNATRPEAIGVGL
PGQTAGSSGGSSGGSSAHIVMV DAYKPTK