Supplementary Materials

Heavy Chain

VH1-7 FWR1	CDR1	VH1-7 FWR2	CDR2	VH1-7 FWR3	CDR3

Light Chain

Vκ1 FWR1	CDR1	Vκ1 FWR2	CDR2	Vκ1 FWR3	CDR3

Figure S1. A simple schematic diagram of the IgM constructs
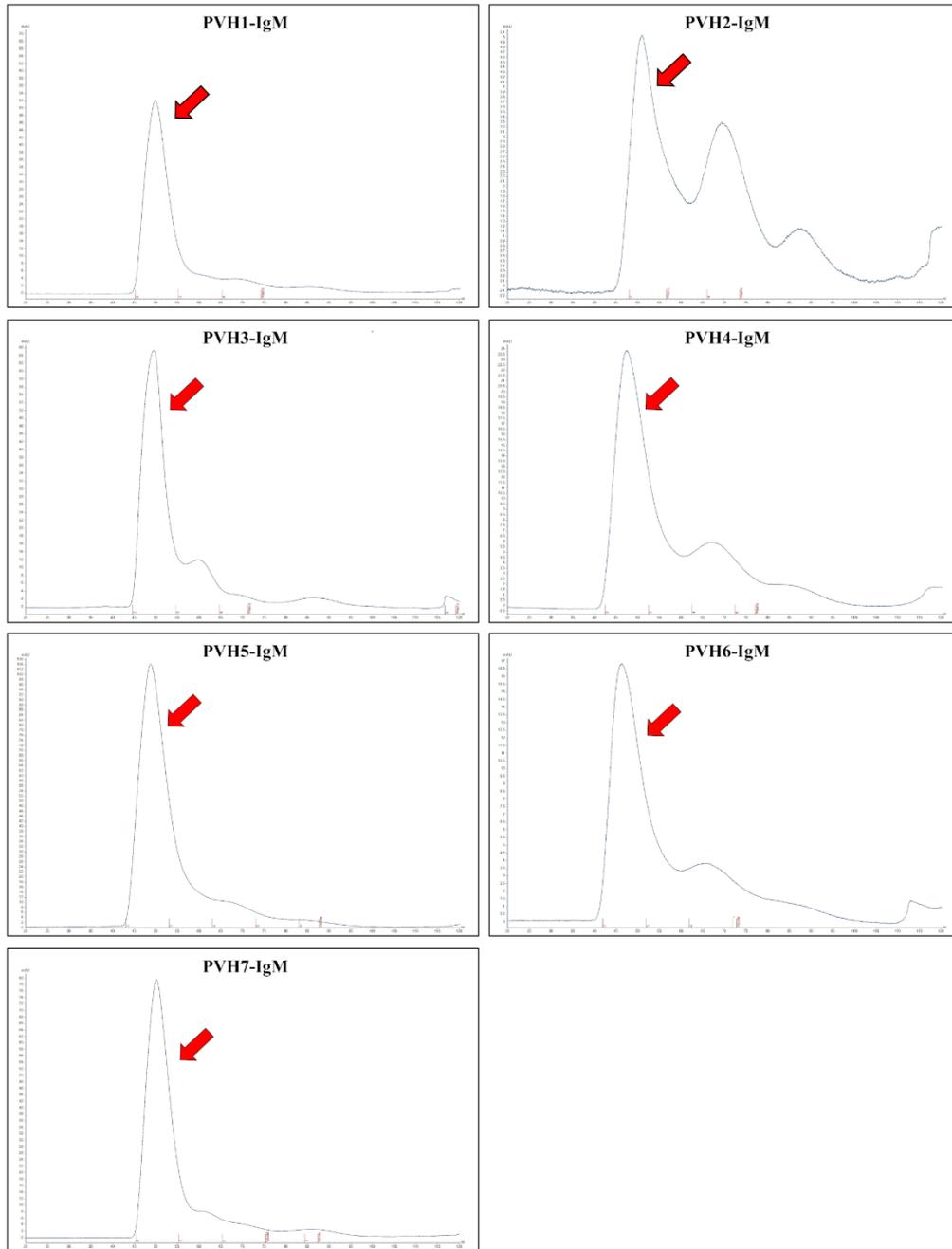
Figure S2. Size exclusion chromatogram of PVH1-7 IgM variants. The red arrows indicate the multimeric fractions
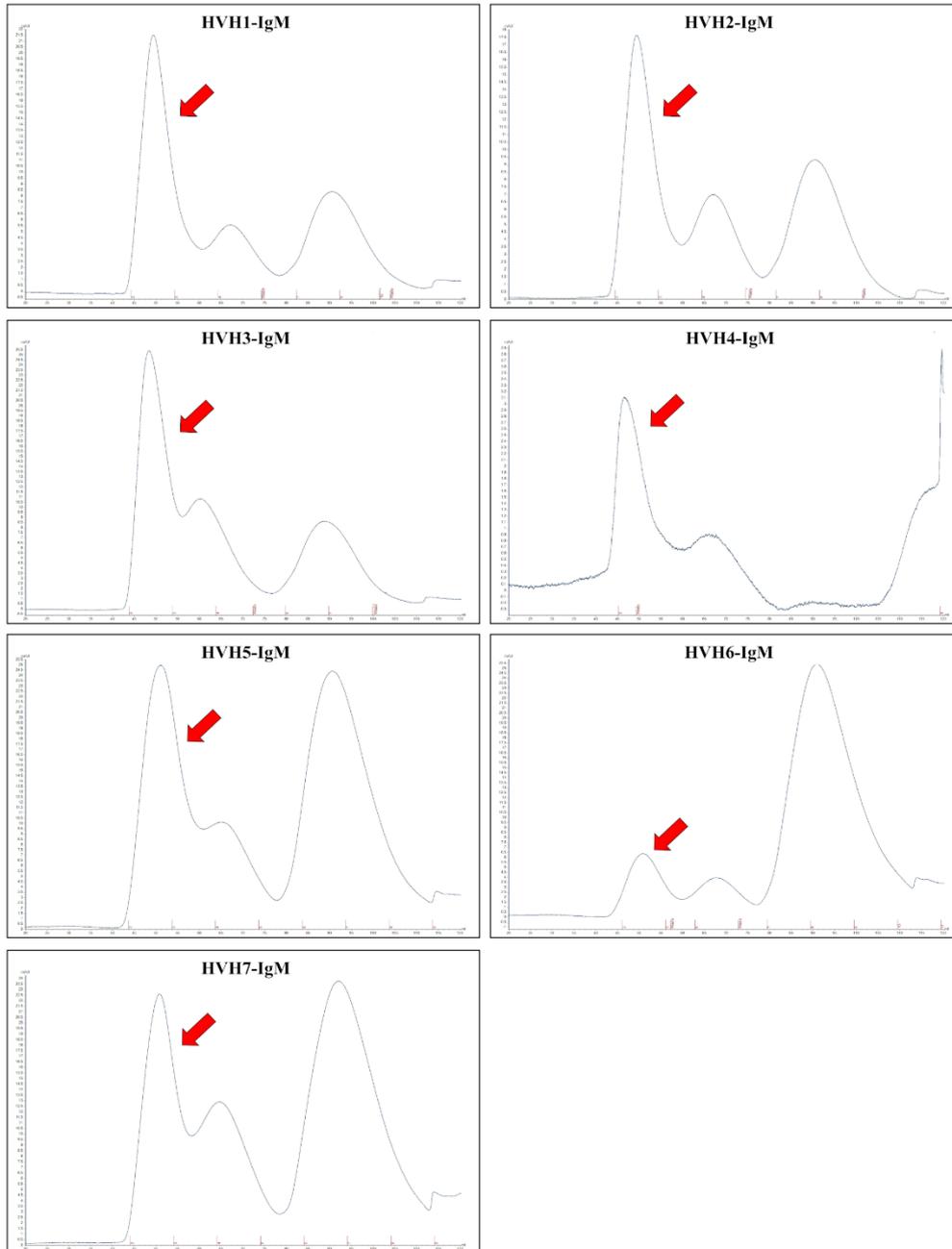
Figure S3. Size exclusion chromatogram of HVH1-7 IgM variants. The red arrows indicate the multimeric fractions
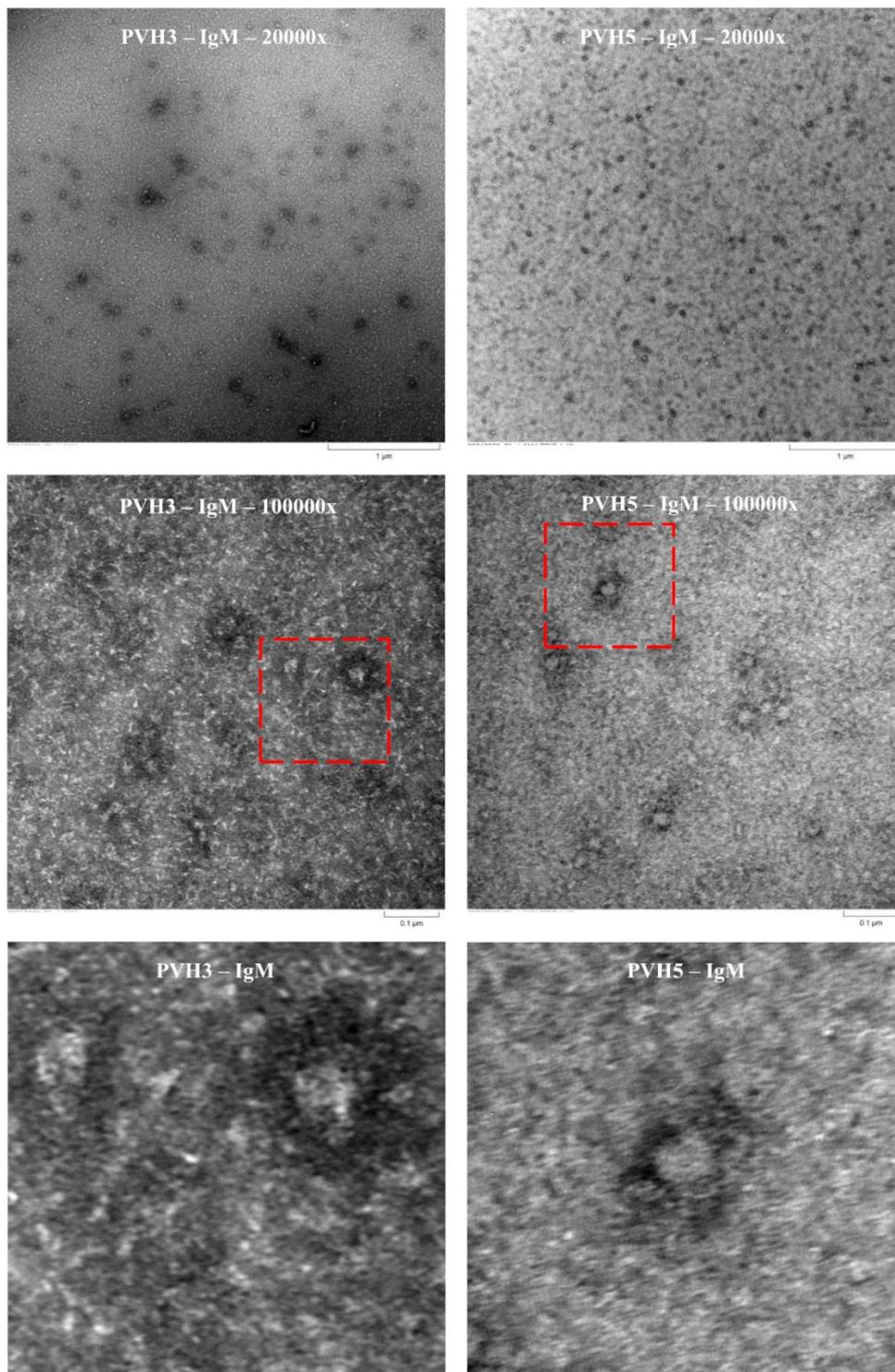
Figure S4. Negatively stained PVH1 and PVH3 IgM samples using Uranyl Acetate, with the images acquired using the 80kV TEM (RT). Future follow-up can include using 200kV cryo-TEM (for better resolution). The scale bars are indicated, except for the two images at the bottom that are 4x enlarged zoom of the 100000x images above

Figure S5. Loading graph of PVH1-7 on Protein L biosensor. The red arrows indicate the loading phase of respective IgM variants
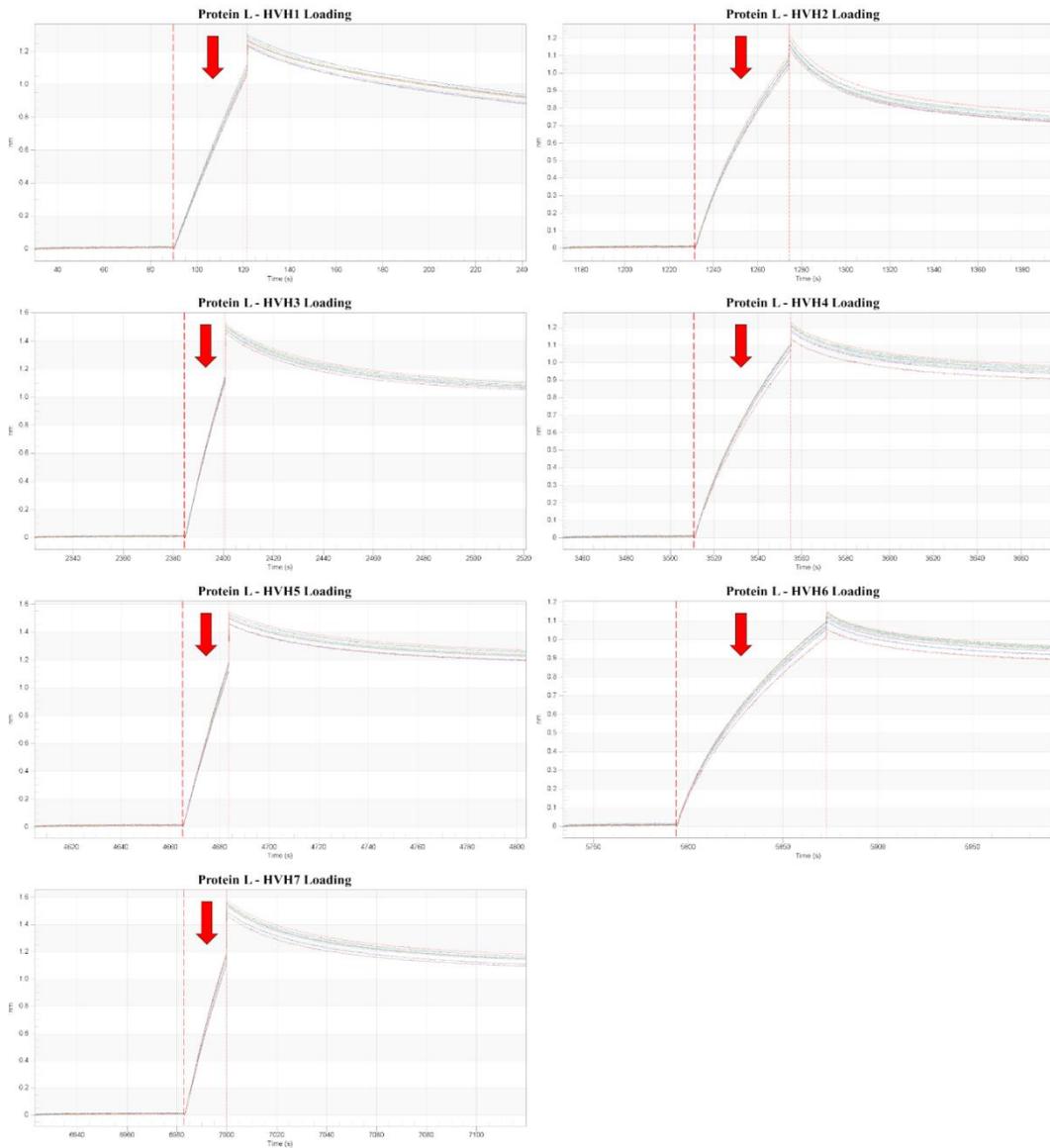
Figure S6. Loading graph of HVH1-7 on Protein L biosensor. The red arrows indicate the loading phase of respective IgM variants
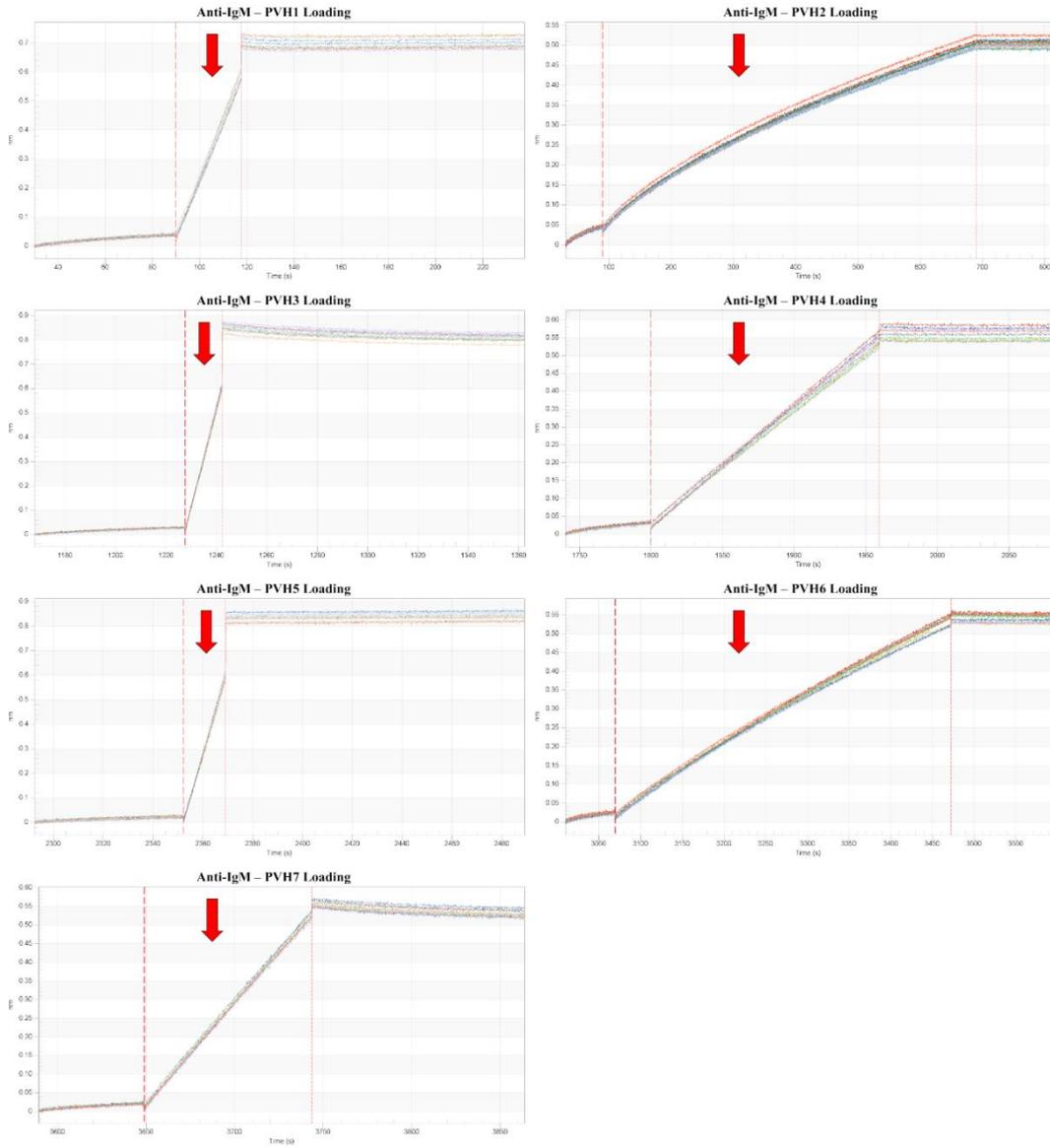
Figure S7. Loading graph of PVH1-7 on Anti-IgM bound on SA biosensor. The red arrows indicate the loading phase of respective IgM variants
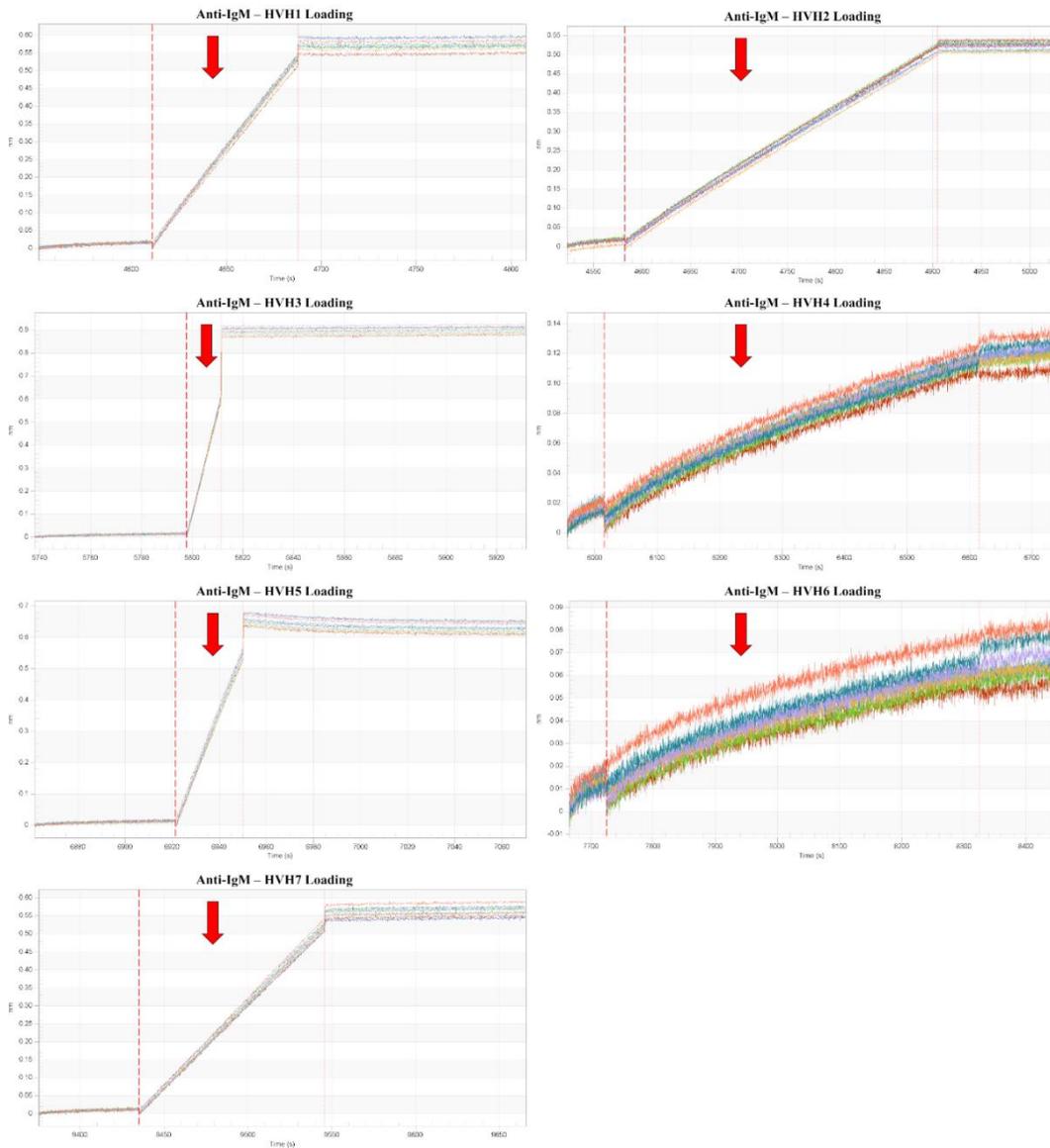
Figure S8. Loading graph of HVH1-7 on Anti-IgM bound on SA biosensor. The red arrows indicate the loading phase of respective IgM variants