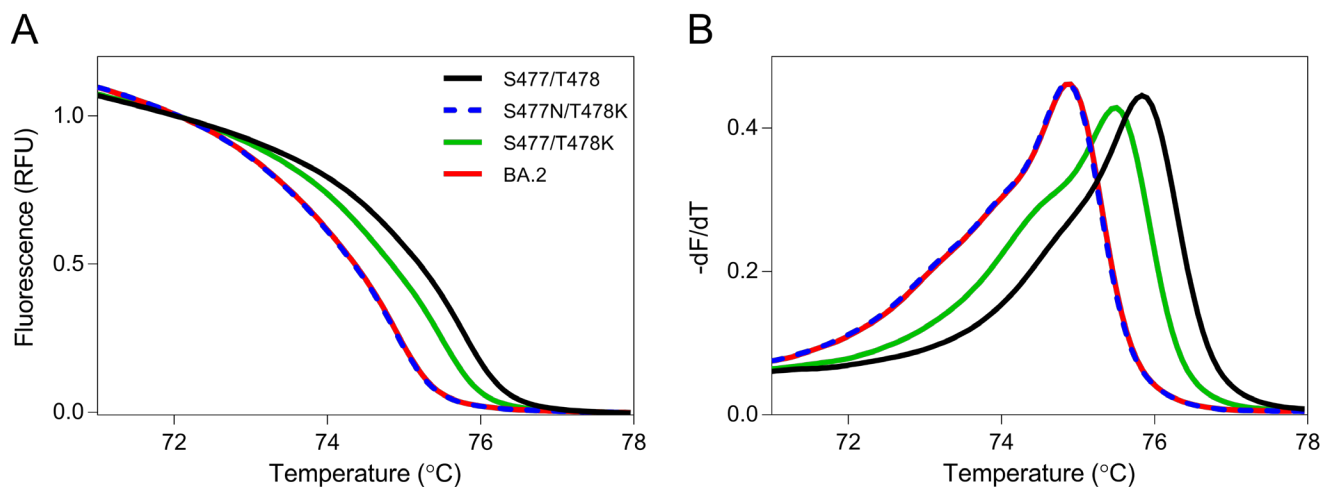
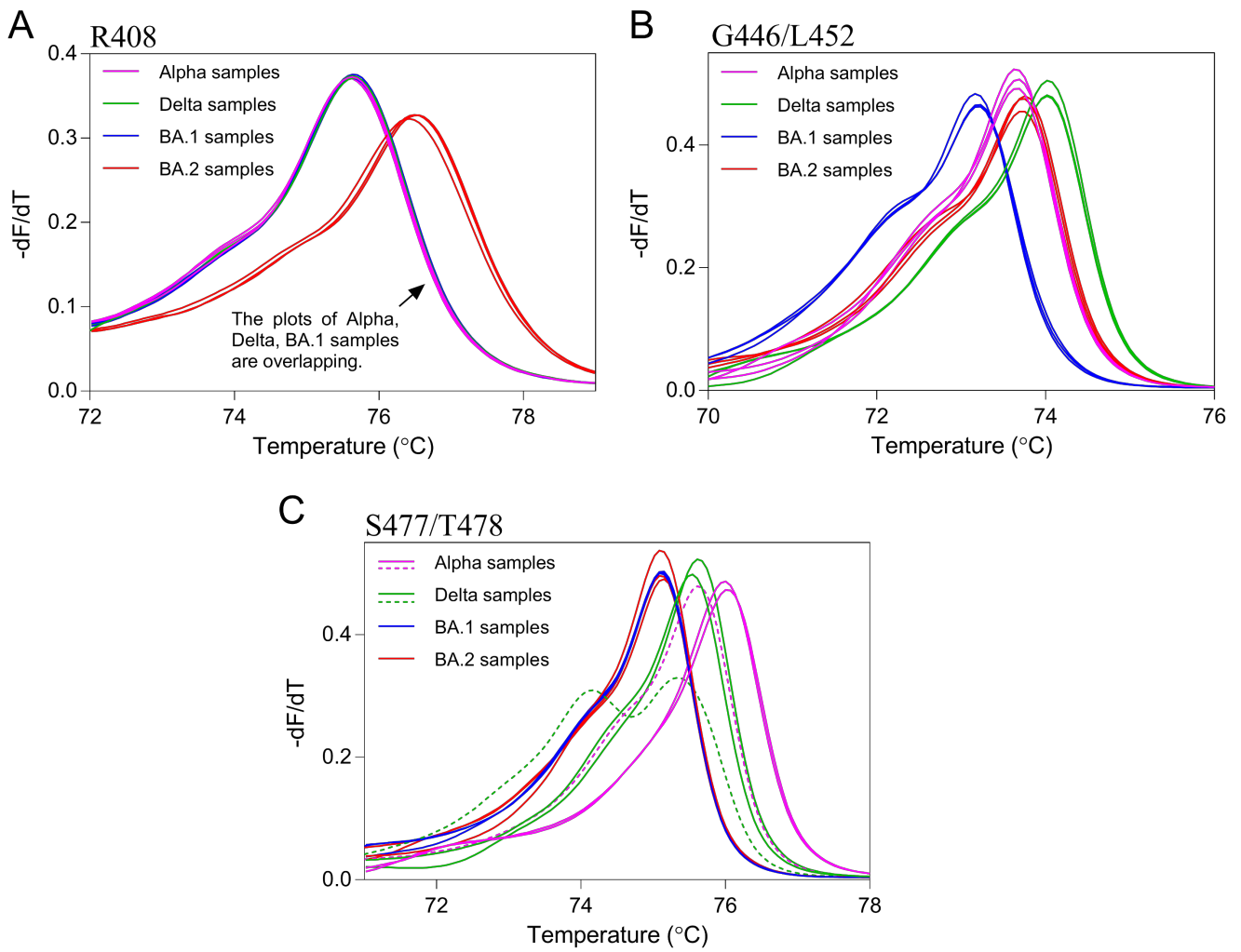


**Fig. S1.** Normalized melting curves and melting peaks of positive control RNAs for the R446/L452 site. Normalized melting curve plots (A) and melting peak plots (B) for the R446/L452 site were acquired using standard fragments of the G446/L452 RBD (dashed black line), G446S/L452 RBD (solid blue line), G446/L452R RBD (solid green line), and BA.2 RBD (solid red line).



**Fig. S2.** Normalized melting curves and melting peaks of positive control RNAs for the S477/T478 site. Normalized melting curve plots (A) and melting peak plots (B) for the S477/T478 site were acquired using standard fragments of the S477/T478 RBD (solid black line), S477N/T478K RBD (dashed blue line), S477/T478K RBD (solid green line), and BA.2 RBD (solid red line).



**Fig. S3.** Melting peaks of clinical samples for three RBD sites. Melting peak plots for the R408 (A), G446/L452 (B), and S477/T478 sites were acquired using clinical samples with three Alpha variants (pink line), three Delta variants (green line), three BA.1/BA.1.1 variants (blue line), and three BA.2 variants (red line). Solid lines indicate true positive and true negative samples. Dashed lines indicate false negative samples.