Supplementary Information (SI) for Analytical Methods. This journal is © The Royal Society of Chemistry 2025 b a anti-ACTH 0.8 anti-ACTH Sample 1 Drain Current/mA Drain Current/mA Sample 2 0.8 0.7 0.6 0.6 0.5 0.4 -2.0 0.0 -0.5 0.5 1.0 1.5 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 Gate Voltage/V Gate Voltage/V d C 0.9 anti-ACTH anti-ACTH Orain Current/m Co.20.0.20.0.15 Sample 3 0.8 Sample 4 Drain Current/mA 0.7 0.6 0.5 0.4 0.3 0.10 0.2 1.0 2.0 1.5 2.0 -0.5 0.0 0.5 1.5 2.5 -0.5 0.0 0.5 1.0 2.5 Gate Voltage/V Gate Voltage/V