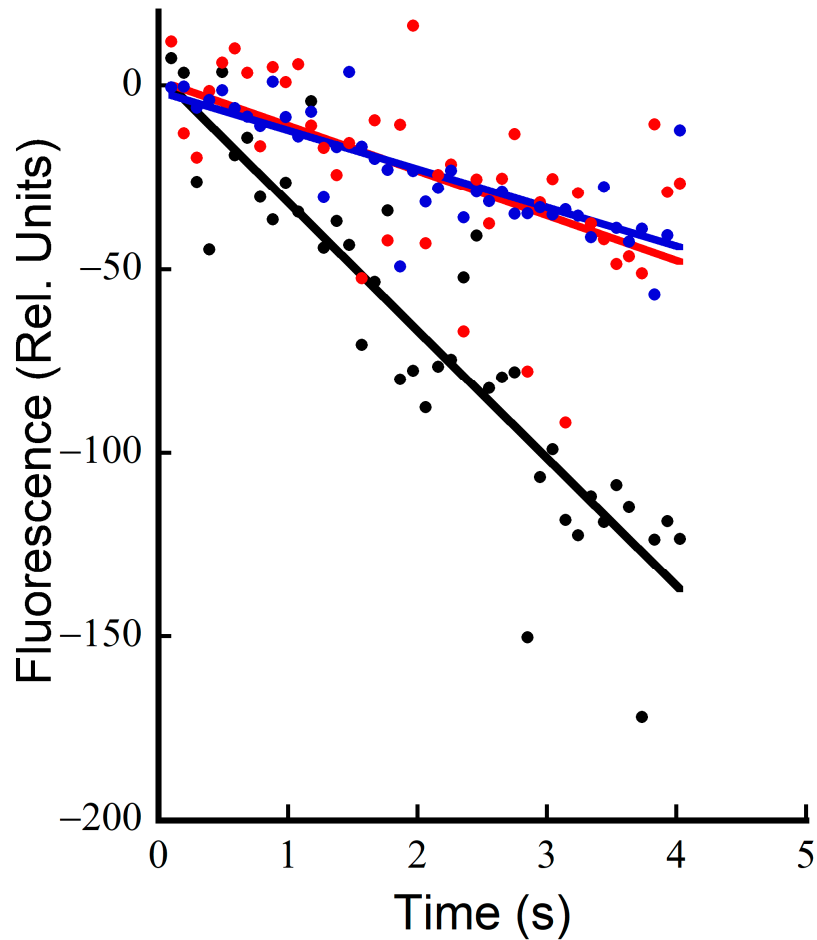


Δ pH Formation



Supplementary Figure S1. Dependence of proton pumping rate on sodium gradient. WT cells in a sodium-containing buffer when treated with the sodium gradient disruptor monensin have acridine orange fluorescence quenching rates similar to cells in a buffer lacking sodium. Acridine orange fluorescence of dark-adapted WT cells in the JTS-100 in response to the presence of monensin in TCN buffer. Cells were dark adapted with acridine orange (5 μ M) for 20 min in either TCN buffer (black, red) or TCK buffer (blue). For samples in TCN buffer, a sample was prepared with KCl (150mM) plus Val (10 μ M), DCCD (500 μ M), and KCN (200 μ M) and stirred in the dark for 5 min (black trace) or with the addition of 50 μ M monensin (red). A sample in TCK buffer with the addition of Val (10 μ M), DCCD (500 μ M), and KCN (200 μ M) was otherwise treated the same as the black trace (blue trace).