Figure 1

**The single compartment pump leak model including KCC2 and its analytical solution**

1. Schematic of pump leak model. The compartment is approximated by a cylinder and volume changes are equivalent to changes in the cylindrical height. Potassium (green, K+), sodium (orange, Na+) and chloride (blue, Cl-) are included as permeable ions; impermeable anions (magenta, Az) have average intracellular charge z. The KCC2 transporter causes efflux of equal parts Cl- and K+ and the sodium-potassium ATPase effluxes 3 Na+ parts for 2 K+ parts moved into the cell.
2. Time series over 100 seconds for different intracellular starting concentrations of Cl-, all of which result in the same steady state.