# Modulation by extracellular and intracellular iodide of volume-activated Cl- current in HeLa cells

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The patch-clamp technique was used to study the effect of extracellular and intracellular iodide on the properties of the volume-activated anion current in HeLa cells. Upon hypotonic challenge, HeLa cells responded by activating an outwardly rectifying Cl- current. Replacement of extracellular Cl- by a I-, a more permeable anion, increased the peak outward and inward current, reduced the magnitude of deactivation observed at depolarized potentials and shifted the half-maximal (V0.5) deactivation voltage towards more positive values. On the other hand, when internal Cl- was-replaced by I- the volume-activated current was not observed in normal, Cl--rich hypotonic extracellular solution. However, switching to a hypotonic extracellular solution containing a mixture of Cl- and I- resulted in the activation of the volume-sensitive current. Furthermore, once the current-was activated, I- could be excluded from the external solution without significantly affecting the current properties. Thes