

Journal: Molecular Pharmacology

Title: Inhibition of BK channels by nanomolar concentrations of  $\text{Ag}^+$

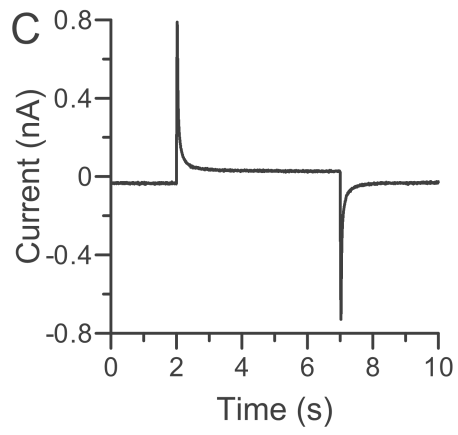
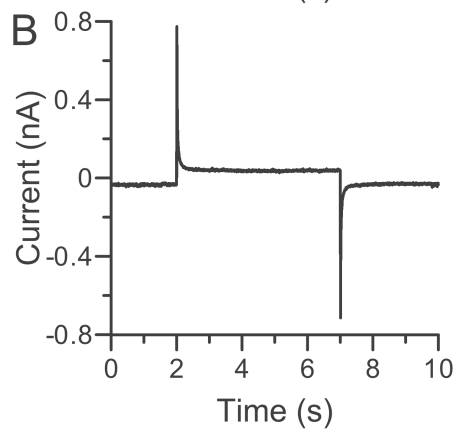
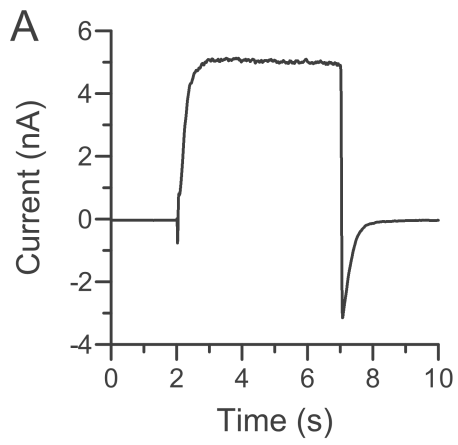
Authors: Yu Zhou, Xiaoming Xia, Christopher J. Lingle

**Supplementary Fig. 1.**  $\text{Ag}^+$  inhibition cannot be reversed by DTT. A, BK current evoked by 200 mV test pulse in  $10 \mu\text{M Ca}^{2+}$  before  $\text{Ag}^+$  treatment. B, Current trace evoked by 200 mV test pulse in  $10 \mu\text{M Ca}^{2+}$  after 2-min perfusion in 500 nM  $\text{Ag}^+$ . C, Current trace evoked by 200 mV test pulse in  $10 \mu\text{M Ca}^{2+}$  after 20-min perfusion in 10 mM DTT.

**Supplementary Fig. 2.** Distribution of cysteines in the cytosolic domain of a BK  $\alpha$ -subunit. The structural pictures are rendered from the  $\text{Ca}^{2+}$ -free human BK cytosolic domain structure (Protein Data Bank id: 3NFA) in UCSF Chimera (<http://www.cgl.ucsf.edu/chimera/>). The linker between the cytosolic domain and the BK pore is colored in white. The RCK1 sub domain is colored in blue. The RCK2 sub domain is colored in red. The two assembly interfaces are colored in cyan. The intermediate helix-turn-helix structures in RCK1 and RCK2 that form the flexible interface are colored in cornflower blue and magenta, respectively. The  $\text{Ca}^{2+}$ -bowl is colored in orange. Cysteines are colored in yellow. The numbers in parentheses are the residue sequence numbers of cysteines in mSlo1. A, The structure is oriented to show the cysteines (C7, C8, C9, C10) near the assembly interface in the RCK1 sub domain. The side chains of these 4 cysteines are displayed as ball-stick. B, The structure is oriented to show the

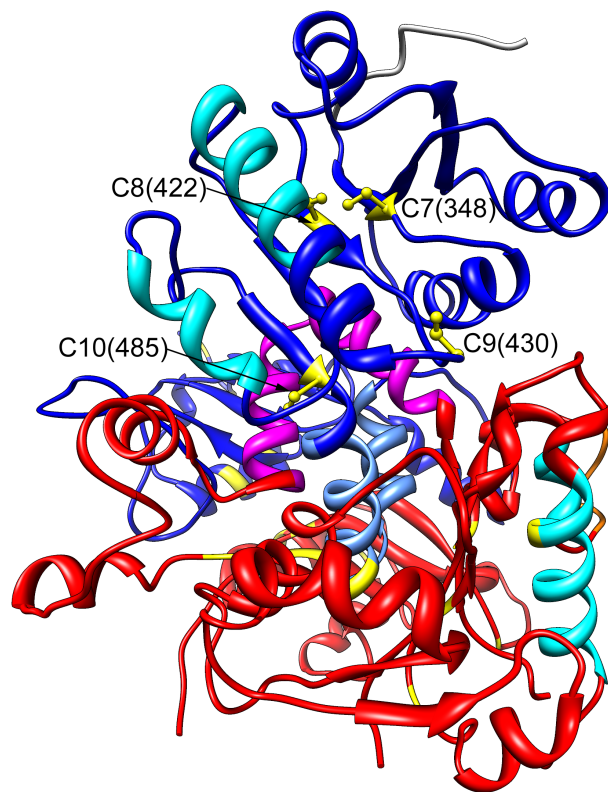
cysteines near the flexible interface (C11 and C23) or the RCK2 assembly interface (C19, C21 and C22). The side chains of these 5 cysteines are displayed as ball-stick.

### Supplementary Fig. 1



## Supplementary Fig. 2

A



B

