Supplemental information

Development of a novel cell-based assay system for high throughput screening of compounds acting on background two-pore domain K^+ channels

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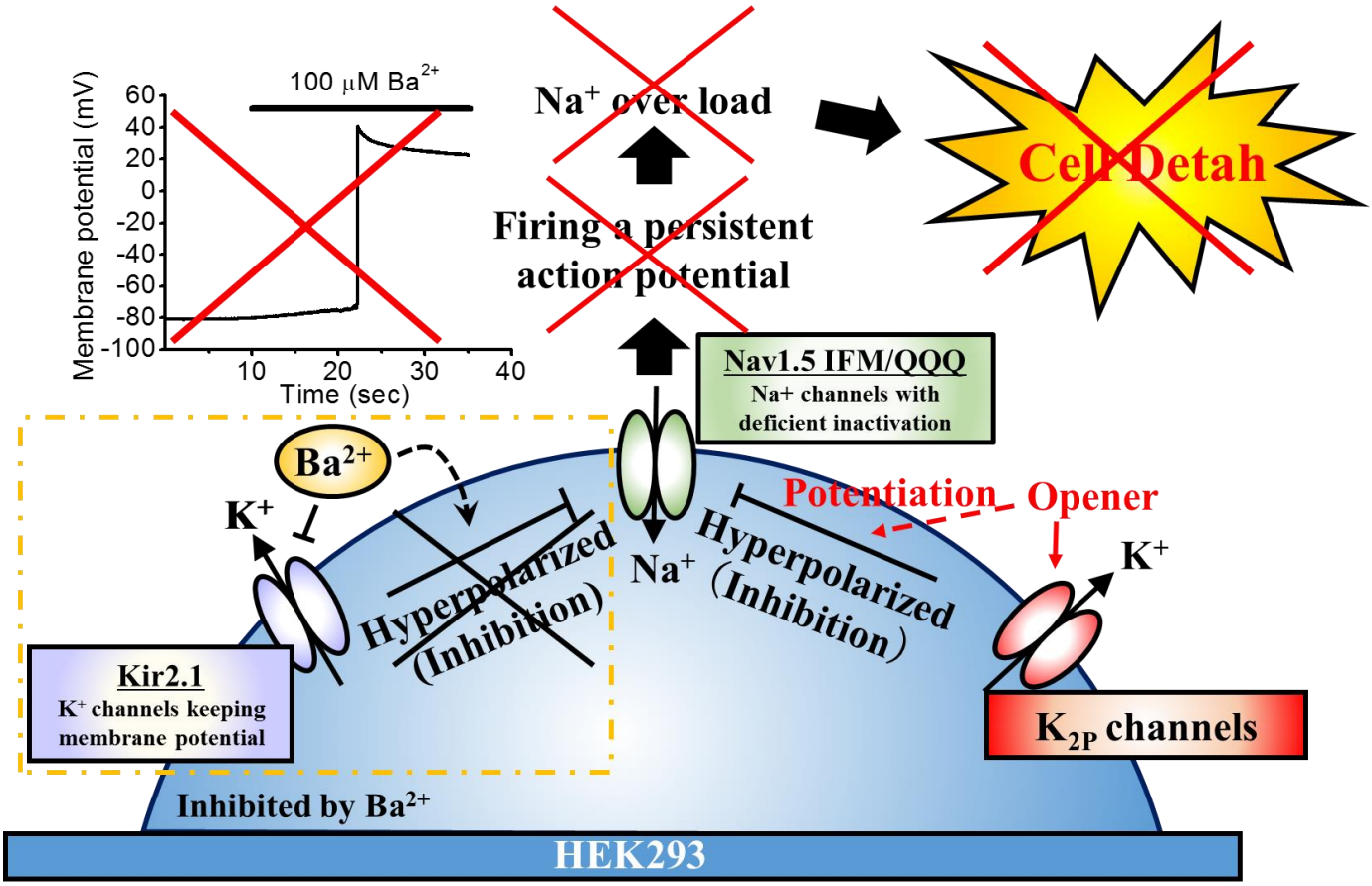

Supplemental Figure 1. Schematic diagram for K_{2P} channel openers. Schematic diagram showing the concept of our new cell-based assay for K_{2P} channel openers. If K_{2P} channels are activated by selective channel openers, the RMP remains relatively hyperpolarized even in the presence of Ba^{2+} and Ba^{2+}-induced cell death is inhibited.

Supplemental Table 1. Ba^{2+} sensitivity of Kir2.1 and K_{2P} channels.

Channels	Gene	Ba^{2+} IC_{50}	Reference
Kir2.1	**KCNJ2**	**16.2±3.6 μM**	**Schram et al.,2003[19]**
TREK-1	**KCNK2**	**560±3 μM**	**Xiao-Yun Ma et al., 2011[29]**
TRAAK	**KCNK4**	**insensitive**	**Lesage et al., 2000[28]**
TASK-1	**KCNK3**	**>400 μM**	**Larkman et al.,2005[20]**
TASK-3	**KCNK9**	**>300 μM**	**Kim et al., 2000[21]**

Supplemental Table 1. Ba^{2+} sensitivity of Kir2.1 and K_{2P} channels

Data depicting sensitivity to block of K_{2P} channels to Ba^{2+} are listed and compared with results for Kir2.1. It is well known that Kir2.1 is very sensitive to Ba^{2+} in comparison with K_{2P} channels. The K_{2P} channels those are listed are either almost insensitive to or only partially blocked by much higher Ba^{2+} concentration.