Dissection of the Voltage-Activated Potassium Outward Currents in Adult Mouse Ventricular Myocytes: $I_{to,f}$, $I_{to,s}$, $I_{K,slow1}$, $I_{K,slow2}$, & $I_{ss}$

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Keywords: Electrophysiology, $K^+$ currents, Adult Mouse Ventricular Myocytes.

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Supplement Fig. S1  The effect of 4-AP and HpTx-2 co-treatments on I_{Kv}.  

**a.** Representative I_{Kv} traces before and after both HpTx-2 (5 µM) and 4-AP (250 µM) administrations are displayed.  **b.** HpTx-2 and 4-AP sensitive current inactivates very rapidly.  **c.** I_{K,slow2} was relatively insensitive to concurrent administrations of 4-AP (250 µM) and HpTx-2 (5 µM) while these drugs selectively reduced I_{Io} and I_{K,slow1}.

Supplement Fig. S2  Pharmacological Inhibitors on I_{Kv} in K_{V1DN} cardiomyocytes.  

**a & b.** In K_{V1DN} cardiomyocytes, I_{Kv} fitted with 2-exponential function virtually lacks 4-AP sensitive current, whereas small 4-AP sensitive current is observed in the 3-exponentially fitted I_{Kv}.  **c.** Representative I_{Kv} of K_{V1DN} myocytes in the absence or presence of HpTx-2 (5 µM) is illustrated that it blocked most of the fast component, leaving a very slow component.

Supplement Fig. S3  I_{Kv} in Irx5-deficient cardiomyocytes.  

Loss of Irx5 leads to disruption of transmural difference in I_{Io} densities while not affecting I_{K,slow1} and I_{K,slow2}.  n = 6 – 8 per group.  N = 5.  *,  P < 0.05 vs. EPI of each genotype.  NS, not significant.
Supplemental Fig. S1

a

Current with HpTx-2 & 4-AP

b

I_{to}, I_{K,slow1}, I_{K,slow2}

C

Current with HpTx-2 & 4-AP
Supplementary Fig. S2

**a**
- Control
- 4-AP (250 µM)

**b**
- Control
- HpTx-2 (5 µM)

**c**
- Control
- HpTx-2 (5 µM)

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**Graphs A and B**
- Voltage steps: +60 mV to -80 mV and +60 mV to +60 mV.
- Duration: 20 seconds.
- Current: 7 pA/pF.
- Time scale: 4 sec.

**Graph C**
- Voltage steps: +30 mV to -80 mV.
- Duration: 20 seconds.
- Current: 7 pA/pF.
- Time scale: 4 sec and 200 ms.
Supplemental Fig. S3

- Current Density (pA/pF) for Irx5 WT and Irx5 KO

- Bars represent the current density with error bars indicating standard deviation.

- **I_{to}**: Statistical significance indicated with asterisks (*).
- **I_{K,slow1}** and **I_{K,slow2}**: Statistical significance indicated with asterisks (*).

- Legend: ENDO (white bars) vs. EPI (black bars)