Guinea Pig Ventricular IKrWT-CR01-ESM

Enhanced Simucore Model Based Upon: Clancy-Rudy Markovian Model of Wild-Type IKr Channels in a Cardiac Ventricular Cell, 2001; v. 2.0

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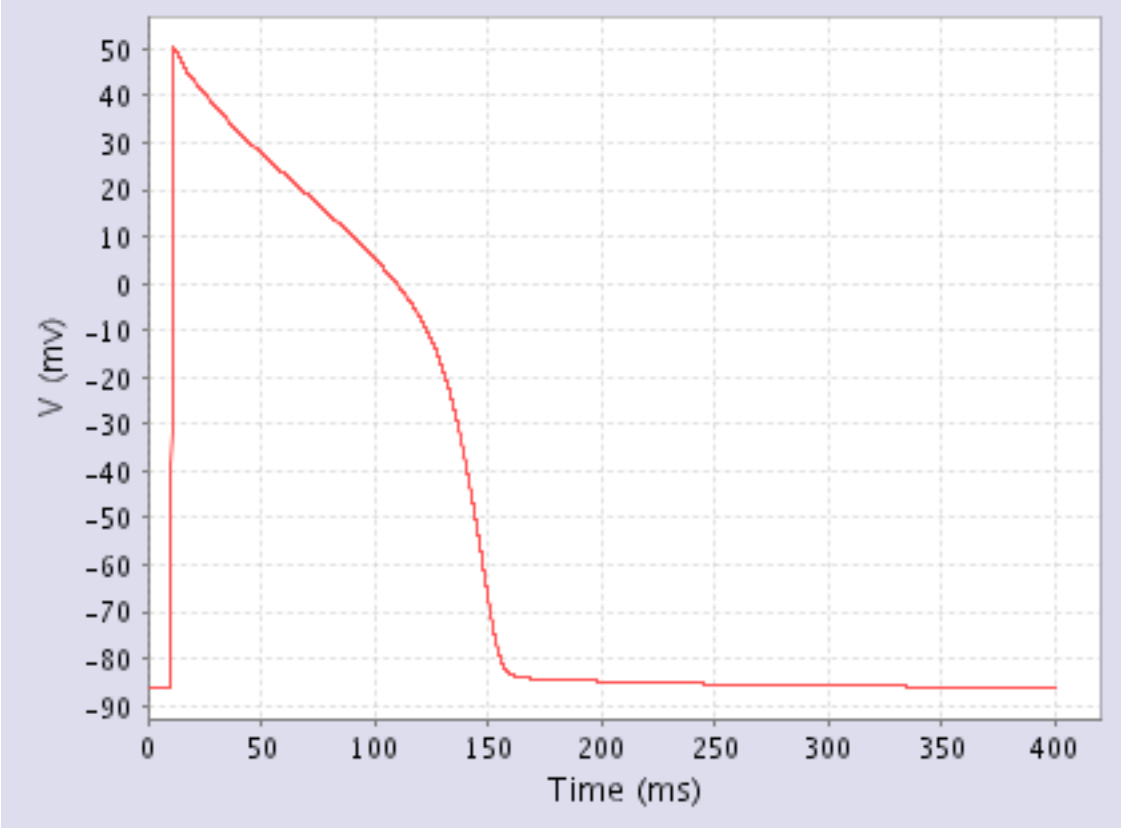
1. Description



Example action potential (BCL = 400 ms).

This model simulates guinea pig ventricular action potentials. The orignal Hodgkin-Huxley type formulation of the rapid component of the delayed-rectifier potassium current (IKr) was replaced with the Markovian one. It includes three closed states (C3, C2 and C1), an open, conducting state (O), and a single inactivation state (I).

Abstract excerpt: *"We developed Markovian models of wild-type (WT) and mutant I(Kr) channels and incorporated these models into a comprehensive model of the cardiac ventricular cell."*

2. References

- Clancy CE, Rudy Y.
  Cellular consequences of HERG mutations in the long QT syndrome: precursors to

sudden cardiac death.
Cardiovasc Res. 2001 May;50(2):301-13.
PMID: 11334834

3. Ordering

- **Order this model** or request further information.