

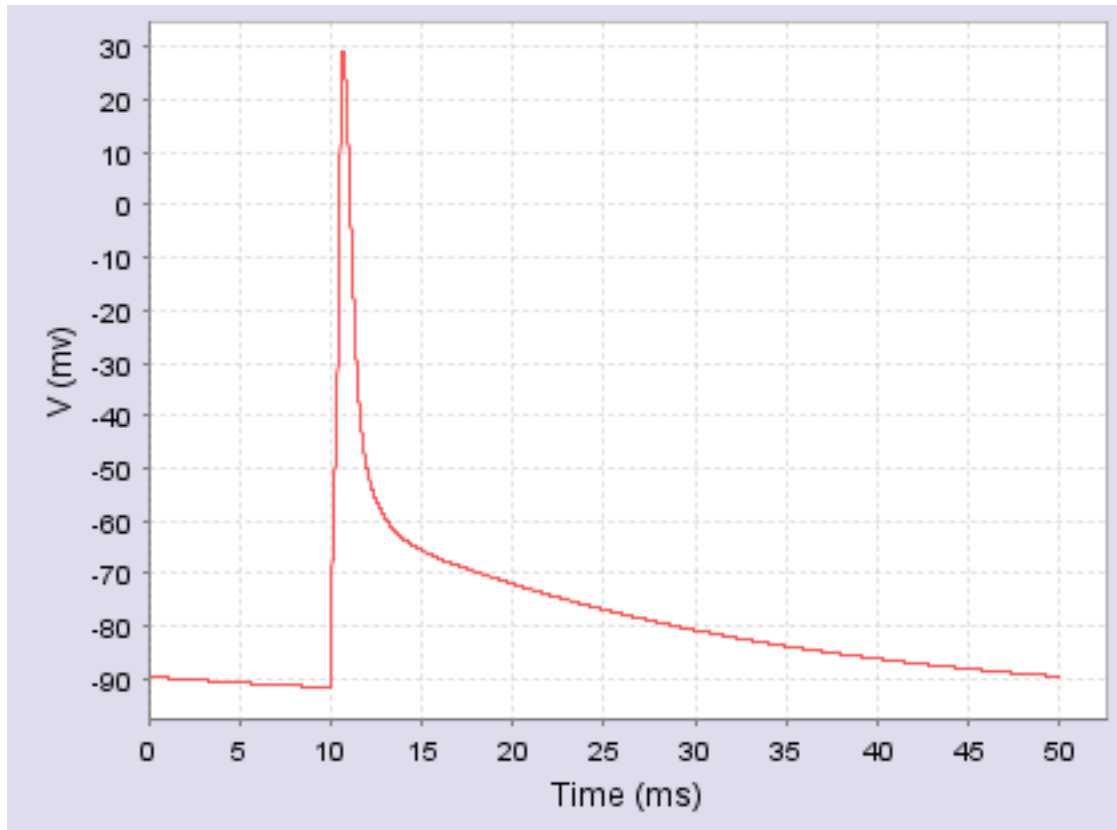
Frog Striated Muscle ACH70-ESM

**Enhanced Simucore Model Based Upon: Adrian, Chandler,
Hodgkin Model of Action Potentials in Striated Muscle
Cells, 1970; v. 2.0**

Table of contents

1 Description.....	2
2 References.....	3
3 Ordering.....	3

1. Description



Example action potential (BCL = 50 ms).

This model simulates action potentials in frog striated muscle. The model is based on Hodgkin-Huxley type equations.

Abstract excerpt: *"Reconstructions of ionic currents were made in terms of the parameters (m , n , h) of the Hodgkin-Huxley model for the squid axon, using constants which showed a similar dependence on voltage. Propagated action potentials and conduction velocities were computed for various conditions on the assumption that the T system behaves as if it were a series resistance and capacity in parallel with surface capacity and the channels for sodium, potassium and leak current. There was reasonable agreement with observed values, the main difference being that the calculated velocities and rates of rise were somewhat less than those observed experimentally."*

2. References

- Adrian RH, Chandler WK, Hodgkin AL.
Voltage clamp experiments in striated muscle fibres.
J Physiol. 1970 Jul;208(3):607-44.
PMID: [5499787](#)
- Adrian RH, Peachey LD.
Reconstruction of the action potential of frog sartorius muscle.
J Physiol. 1973 Nov;235(1):103-31.
PMID: [4778131](#)

3. Ordering

- [Order this model](#) or [request further information](#).