

# Resource Summary Report

Generated by PRECISE-TBI on Jul 31, 2026

## IonChannelGenealogy

RRID:SCR\_014194

Type: Tool

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### Proper Citation

IonChannelGenealogy (RRID:SCR\_014194)

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### Resource Information

**URL:** <http://icg.neurotheory.ox.ac.uk/>

**Proper Citation:** IonChannelGenealogy (RRID:SCR\_014194)

**Description:** A database that provides a comprehensive and quantitative assay of ion channel models currently available in the neuroscientific modeling community. Specifically, it contains analyses of the ion channel models from NEURON. The database quantifies the similarity in kinetics between models using a series of standardized voltage clamp simulation protocols and subsequent cluster analysis. Citation links and duplications of channels, along with similarity of kinetics between channel models, are combined into genealogical trees and dendrograms that are searchable through the ICG web interface. ICG also experimentally recorded current traces and provides tools for uploading new channel models.

**Abbreviations:** ICG

**Synonyms:** ICGenealogy

**Resource Type:** data or information resource, database

**Keywords:** database, ion channel model, neuron, kinetic, dendrogram, genealogical tree

**Availability:** Available to the research community, The community can contribute to this resource

**Resource Name:** IonChannelGenealogy

**Resource ID:** SCR\_014194

**Record Creation Time:** 20220129T080319+0000

**Record Last Update:** 20260729T044325+0000

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### Ratings and Alerts

No rating or validation information has been found for IonChannelGenealogy.

No alerts have been found for IonChannelGenealogy.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 7 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [PRECISE-TBI](#) .

Makarov R, et al. (2025) DendroTweaks, an interactive approach for unraveling dendritic dynamics. eLife, 13.

Makarov R, et al. (2024) DendroTweaks: An interactive approach for unraveling dendritic dynamics. bioRxiv : the preprint server for biology.

Hjorth JJJ, et al. (2021) Predicting Synaptic Connectivity for Large-Scale Microcircuit Simulations Using Snudda. Neuroinformatics, 19(4), 685.

M??ki-Marttunen T, et al. (2019) Biophysical Psychiatry-How Computational Neuroscience Can Help to Understand the Complex Mechanisms of Mental Disorders. Frontiers in psychiatry, 10, 534.

Podlaski WF, et al. (2017) Mapping the function of neuronal ion channels in model and experiment. eLife, 6.

Guet-McCreight A, et al. (2016) Using a Semi-Automated Strategy to Develop Multi-Compartment Models That Predict Biophysical Properties of Interneuron-Specific 3 (IS3) Cells in Hippocampus. eNeuro, 3(4).

Sharpee TO, et al. (2016) 25th Annual Computational Neuroscience Meeting: CNS-2016. BMC neuroscience, 17 Suppl 1(Suppl 1), 54.