

# Resource Summary Report

Generated by [NIF](#) on Apr 9, 2025

## ChannelPedia

RRID:SCR\_003807

Type: Tool

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### Proper Citation

ChannelPedia (RRID:SCR\_003807)

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### Resource Information

**URL:** <http://channelpedia.epfl.ch/>

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**Description:** An information management framework for comprehensive ion channel information. It is a knowledge base system centered on genetically expressed ion channel models and it encourages researchers of the field to contribute, build and refine the information through an interactive wiki-like interface. It is web-based, freely accessible and currently contains 187 annotated ion channels with 50 Hodgkin-Huxley models (September 2014). Channelpedia provides an ideal platform to collectively build ion channel knowledge base by accommodating both structured and unstructured data. The current version of Channelpedia contains the following sections : Introduction, Genes, Ontologies, Interactions, Structure, Expression, Distribution, Function, Kinetics and Models. Newly published literature related to ion channels is automatically queried every week from PubMed and added to respective categories. Currently, Channelpedia contains ~180,000 abstracts related to ion channels from Pubmed.

**Abbreviations:** Channelpedia

**Synonyms:** Channel pedia

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

**Defining Citation:** [PMID:22232598](#)

**Keywords:** ion channel, model, cell, gene, transcript, ontology, interaction, hodgkinhuxley model, kinetics

**Funding:**

**Availability:** The community can contribute to this resource, Free, Public

**Resource Name:** ChannelPedia

**Resource ID:** SCR\_003807

**Alternate IDs:** nlx\_158108

**Record Creation Time:** 20220129T080221+0000

**Record Last Update:** 20250409T060317+0000

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## Ratings and Alerts

No rating or validation information has been found for ChannelPedia.

No alerts have been found for ChannelPedia.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 8 mentions in open access literature.

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

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

Ranjan R, et al. (2019) A Kinetic Map of the Homomeric Voltage-Gated Potassium Channel (Kv) Family. *Frontiers in cellular neuroscience*, 13, 358.

Mäki-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.

Churchill CDM, et al. (2019) EDEn-Electroceutical Design Environment: Ion Channel Tissue Expression Database with Small Molecule Modulators. *iScience*, 11, 42.

Eyal G, et al. (2018) Human Cortical Pyramidal Neurons: From Spines to Spikes via Models. *Frontiers in cellular neuroscience*, 12, 181.

Hinard V, et al. (2017) Annotation of functional impact of voltage-gated sodium channel mutations. *Human mutation*, 38(5), 485.

Hinard V, et al. (2016) ICEPO: the ion channel electrophysiology ontology. *Database : the journal of biological databases and curation*, 2016.

Law R, et al. (2015) Bioelectric memory: modeling resting potential bistability in amphibian embryos and mammalian cells. *Theoretical biology & medical modelling*, 12, 22.