Resource Summary Report

Generated by NIF on May 17, 2025

VKCDB - Voltage-gated K Channel Database

RRID:SCR_013489
Type: Tool

Proper Citation

VKCDB - Voltage-gated K Channel Database (RRID:SCR_013489)

Resource Information

URL: http://vkcdb.biology.ualberta.ca/

Proper Citation: VKCDB - Voltage-gated K Channel Database (RRID:SCR_013489)

Description: Voltage-gated potassium channel database (VKCDB) is designed to serve as a resource for research on voltage-gated potassium channels. Protein sequences, references, functional data and many other relevant data are included in this database. Mysql is used as the underlying database management system to meet the requirements of future development plans. VKCDB will allow you to browse and search using different annotation criteria, and search against the sequences in VKCDB with VKCBLAST. Displayed entries can be selected to download as multiple sequences in FASTA format for further analyses, such as ClustalW alignment. Several computational tools are being developed to help guide structure function analysis of voltage-gated potassium channels and other protein families in general. VKCDB currently stores 346 voltage-gated potassium channel entries, including some "unknown proteins" annotated by automatic genome annotation projects which share a high degree of sequence similarity with voltage-gated potassium channels. VKCDB was populated using automatic parsing of BLASTP search output. Entries were checked manually for redundancy, sequence conflicts, and isoforms, and they are hyperlinked to their variant entries as well as to entries with sequence conflicts. All entries contain GenBank annotations and Swissprot annotations if available. Current annotations were updated with Swissprot release 43.1 (Apr 2004) and GenBank as of Apr 2004. The snapshot version 3 of VKCDB in XML format as of Apr 2004 can be downloaded here. We collected available electrophysiological data and pharmacological data from over 200 journal articals and stored them in VKCDB. VKCDB is updated regularly from BLAST searches of new entries in GenBank and Swissprot. VKCBLAST are updated to include new sequences within a few days after new entries are added into VKCDB. Sequences of all VKCDB entries were sent to TMHMM and PHD for membrane domain prediction. Both results were parsed and linked to each VKCDB entry page. Multiple alignment of T1 and six transmembrane domains of Kv1-4 and KCNQ (Kv7) family are also presented here. VKCDB is a part of an ongoing high

throughput voltage-gated potassium channel sequencing project in the laboratories of Dr. Warren J. Gallin and Dr. Andy N. Spencer at the University of Alberta, Canada.

Synonyms: VKCDB

Resource Type: data or information resource, database

Funding:

Resource Name: VKCDB - Voltage-gated K Channel Database

Resource ID: SCR_013489

Alternate IDs: nif-0000-03639

Record Creation Time: 20220129T080316+0000

Record Last Update: 20250507T060921+0000

Ratings and Alerts

No rating or validation information has been found for VKCDB - Voltage-gated K Channel Database.

No alerts have been found for VKCDB - Voltage-gated K Channel Database.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 4 mentions in open access literature.

Listed below are recent publications. The full list is available at NIF.

Sharifi M, et al. (2017) Development of models for predicting Torsade de Pointes cardiac arrhythmias using perceptron neural networks. BMC bioinformatics, 18(Suppl 14), 497.

Isenberg JS, et al. (2007) Modulation of angiogenesis by dithiolethione-modified NSAIDs and valproic acid. British journal of pharmacology, 151(1), 63.

Galperin MY, et al. (2005) The Molecular Biology Database Collection: 2005 update. Nucleic acids research, 33(Database issue), D5.

Li B, et al. (2004) VKCDB: voltage-gated potassium channel database. BMC bioinformatics, 5, 3.