Resource Summary Report

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Cerebellar Development Transcriptome Database

RRID:SCR_013096 Type: Tool

Proper Citation

Cerebellar Development Transcriptome Database (RRID:SCR_013096)

Resource Information

URL: http://www.cdtdb.brain.riken.jp/CDT/Top.jsp

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Description: Transcriptomic information (spatiotemporal gene expression profile data) on the postnatal cerebellar development of mice (C57B/6J & ICR). It is a tool for mining cerebellar genes and gene expression, and provides a portal to relevant bioinformatics links. The mouse cerebellar circuit develops through a series of cellular and morphological events, including neuronal proliferation and migration, axonogenesis, dendritogenesis, and synaptogenesis, all within three weeks after birth, and each event is controlled by a specific gene group whose expression profile must be encoded in the genome. To elucidate the genetic basis of cerebellar circuit development, CDT-DB analyzes spatiotemporal gene expression by using in situ hybridization (ISH) for cellular resolution and by using fluorescence differential display and microarrays (GeneChip) for developmental time series resolution. The CDT-DB not only provides a cross-search function for large amounts of experimental data (ISH brain images, GeneChip graph, RT-PCR gel images), but also includes a portal function by which all registered genes have been provided with hyperlinks to websites of many relevant bioinformatics regarding gene ontology, genome, proteins, pathways, cell functions, and publications. Thus, the CDT-DB is a useful tool for mining potentially important genes based on characteristic expression profiles in particular cell types or during a particular time window in developing mouse brains.

Abbreviations: CDT-DB

Resource Type: data or information resource, database, atlas

Defining Citation: PMID:18603407

Keywords: gene expression, fluorescence, function, gene, gene chip, genome,

bioinformatics, brain, cell, cerebellum, development, in situ hybridization, fluroescence differential display, cerebellar development, microarray, mining, mouse, mrna, ontology, pathway, protein, rt-pcr, molecular neuroanatomy resource, transcriptiome, spatiotemporal, cdna microarray, genechip, postnatal, histochemistry, image, postnatal development

Related Condition: Brain development, Brain disorder

Funding: INCF Japan Node ; Japan Society for the Promotion of Science ; Japanese Ministry of Education Culture Sports Science and Technology MEXT ; Japan Science and Technology Agency

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Resource Name: Cerebellar Development Transcriptome Database

Resource ID: SCR_013096

Alternate IDs: nif-0000-00008

Record Creation Time: 20220129T080314+0000

Record Last Update: 20250516T054015+0000

Ratings and Alerts

No rating or validation information has been found for Cerebellar Development Transcriptome Database.

No alerts have been found for Cerebellar Development Transcriptome Database.

Data and Source Information

Source: <u>SciCrunch Registry</u>

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>NIF</u>.

Miller TE, et al. (2014) Lgr5 Marks Post-Mitotic, Lineage Restricted Cerebellar Granule Neurons during Postnatal Development. PloS one, 9(12), e114433.