

# Resource Summary Report

Generated by [FDI Lab - SciCrunch.org](#) on Apr 14, 2025

## CAPS Database

RRID:SCR\_006862

Type: Tool

### Proper Citation

CAPS Database (RRID:SCR\_006862)

### Resource Information

**URL:** <http://www.bioinsilico.org/cgi-bin/CAPSDB/staticHTML/home>

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**Description:** It is a structural classification of helix-cappings or caps compiled from protein structures. Caps extracted from protein structures have been structurally classified based on geometry and conformation and organized in a tree-like hierarchical classification where the different levels correspond to different properties of the caps. CAPS-DB is fully browsable and searchable and is regularly updated. The regions of the polypeptide chain immediately preceding or following a helix are known as Nt- and Ct cappings, respectively. Cappings play a central role stabilizing helices due to lack of intrahelical hydrogen bonds in the first and last turn. Sequence patterns of amino acid type preferences have been derived for cappings but the structural motifs associated to them are still unclassified. CAPS-DB is a database of clusters of structural patterns of different capping types. The clustering algorithm is based in the geometry and the space conformation of these regions. CAPS-DB is a relational database that allows the user to search, browse, inspect and retrieve structural data associated to cappings. The contents of CAPS-DB might be of interest to a wide range of scientist covering different areas such as protein design and engineering, structural biology and bioinformatics. CapsDB v4.0 \* PDB structures: 4591 \* Number of clusters: 859 \* Number of caps: 31452

**Abbreviations:** CAPS-DB

**Synonyms:** CAPS - Database

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

**Defining Citation:** [PMID:22021380](#)

**Keywords:** structural classification, helix-capping, protein engineering, clustering, bio.tools

**Funding:** Research Councils United Kingdom Academic Fellow scheme ;  
Leeds Institute of Molecular Medicine ;  
MICINN and FEDER BIO2011-22568

**Resource Name:** CAPS Database

**Resource ID:** SCR\_006862

**Alternate IDs:** biotools:caps-db, nlx\_149414

**Alternate URLs:** <http://www.bioinsilico.org/CAPSDB>, <https://bio.tools/caps-db>

**Record Creation Time:** 20220129T080238+0000

**Record Last Update:** 20250412T055134+0000

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## Ratings and Alerts

No rating or validation information has been found for CAPS Database.

No alerts have been found for CAPS Database.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 2 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [FDI Lab - SciCrunch.org](#).

Segura J, et al. (2012) CAPS-DB: a structural classification of helix-capping motifs. Nucleic acids research, 40(Database issue), D479.

Galperin MY, et al. (2012) The 2012 Nucleic Acids Research Database Issue and the online Molecular Biology Database Collection. Nucleic acids research, 40(Database issue), D1.