Resource Summary Report

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NLSdb: a database of nuclear localization signals

RRID:SCR_003273
Type: Tool

Proper Citation

NLSdb: a database of nuclear localization signals (RRID:SCR_003273)

Resource Information

URL: http://rostlab.org/services/nlsdb/

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Description: A database of nuclear localization signals (NLSs) and of nuclear proteins targeted to the nucleus by NLS motifs. NLSs are short stretches of residues mediating transport of nuclear proteins into the nucleus. The database contains 114 experimentally determined NLSs that were obtained through an extensive literature search. Using "in silico mutagenesis" this set was extended to 308 experimental and potential NLSs. This final set matched over 43% of all known nuclear proteins and matches no currently known non-nuclear protein. NLSdb contains over 6000 predicted nuclear proteins and their targeting signals from the PDB and SWISS-PROT/TrEMBL databases. The database also contains over 12 500 predicted nuclear proteins from six entirely sequenced eukaryotic proteomes (Homo sapiens, Mus musculus, Drosophila melanogaster, Caenorhabditis elegans, Arabidopsis thaliana and Saccharomyces cerevisiae). NLS motifs often co-localize with DNA-binding regions. This observation was used to also annotate over 1500 DNA-binding proteins. From this site you can: * Query NLSdb * Find out how to use NLSdb * Browse the entries in NLSdb * Find out if your protein has an NLS using PredictNLS * Predict subcellular localization of your protein using LOCtree

Abbreviations: NLSdb

Synonyms: NLSdb - a database of nuclear localization signals

Resource Type: production service resource, data analysis service, service resource, analysis service resource, database, data or information resource

Defining Citation: PMID:12520032

Keywords: nuclear localization signal, nuclear protein, nucleus, motif, predict, protein

Funding: NIGMS 1-P50-GM62413-01;
NSF DBI-0131168

Availability: Free for academic use, Acknowledgement requested, All others should inquire about a commercial license

Resource Name: NLSdb: a database of nuclear localization signals

Resource ID: SCR_003273

Alternate IDs: nif-0000-03191

Old URLs: http://cubic.bioc.columbia.edu/db/NLSdb/

Record Creation Time: 20220129T080218+0000

Record Last Update: 20250428T053028+0000

Ratings and Alerts

No rating or validation information has been found for NLSdb: a database of nuclear localization signals.

No alerts have been found for NLSdb: a database of nuclear localization signals.

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 dkNET.

Takasawa A, et al. (2016) Nuclear localization of tricellulin promotes the oncogenic property of pancreatic cancer. Scientific reports, 6, 33582.

Ikari A, et al. (2014) Nuclear distribution of claudin-2 increases cell proliferation in human lung adenocarcinoma cells. Biochimica et biophysica acta, 1843(9), 2079.

Zuchero JB, et al. (2012) Actin binding to WH2 domains regulates nuclear import of the multifunctional actin regulator JMY. Molecular biology of the cell, 23(5), 853.

Drake KR, et al. (2010) Nucleocytoplasmic distribution and dynamics of the autophagosome

marker EGFP-LC3. PloS one, 5(3), e9806.