PoSSuM

RRID:SCR_006109
Type: Tool

Proper Citation

PoSSuM (RRID:SCR_006109)

Resource Information

URL: http://possum.cbrc.jp/PoSSuM/

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Description: Relational database of all the discovered similar pairs in a huge number of protein-ligand binding sites with annotations of various types (e.g., CATH, SCOP, EC number, Gene ontology). They used a tremendously fast algorithm called SketchSort that enables the enumeration of similar pairs in a huge number of protein-ligand binding sites. They conducted all-pair similarity searches for 3.4 million known and potential binding sites using the proposed method and discovered over 24 million similar pairs of binding sites. PoSSuM enables rapid exploration of similar binding sites among structures with different global folds as well as similar ones. Moreover, PoSSuM is useful for predicting the binding ligand for unbound structures. Basically, the users can search similar binding pockets using two search modes: # Search K is useful for finding similar binding sites for a known ligand-binding site. Post a known ligand-binding site (a pair of PDB ID and HET code) in the PDB, and PoSSuM will search similar sites for the query site. # Search P is useful for predicting ligands that potentially bind to a structure of interest. Post a known protein structure (PDB ID) in the PDB, and PoSSuM will search similar known-ligand binding sites for the query structure.

Abbreviations: PoSSuM

Synonyms: PoSSuM - POcket Similarity Search Using Multiple-Sketches, POcket Similarity Search Using Multiple-Sketches, PoSSuM Database, Pocket Similarity Search using Multiple-Sketches (PoSSuM)

Resource Type: data or information resource, database
Data Citations:

Defining Citation: PMID:22135290, PMID:22113700

Keywords: binding site, ligand-binding site, protein function, protein, prediction, small molecule, drug discovery

Funding Agency: Japan Society for the Promotion of Science, Japan Society for the Promotion of Science

Availability: Freely available, Acknowledgement required

Resource Name: PoSSuM

Resource ID: SCR_006109

Alternate IDs: nlx_151581

Ratings and Alerts

No rating or validation information has been found for PoSSuM.

No alerts have been found for PoSSuM.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 26 mentions in open access literature.

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


Bertucci EM, et al. (2021) Exposure to ionizing radiation disrupts normal epigenetic aging in


Chen L, et al. (2019) A simplified scoring system for the prediction of pancreateoduodenectomy’s complications: An observational study. Medicine, 98(1), e13969.


Westbrook JI, et al. (2016) Stepped-wedge cluster randomised controlled trial to assess the effectiveness of an electronic medication management system to reduce medication errors, adverse drug events and average length of stay at two paediatric hospitals: a study protocol. BMJ open, 6(10), e011811.


Almakadma YS, et al. (2013) Duration of one-lung ventilation stage, POSSUM value and the quality of post-operative analgesia significantly affect survival and length of stay on intensive care unit of patients undergoing two-stage esophagectomy. Saudi journal of anaesthesia, 7(3), 238-43.