

Resource Summary Report

Generated by [Kravitz](#) on Sep 10, 2026

MCMBB

RRID:SCR_006198

Type: Tool

Proper Citation

MCMBB (RRID:SCR_006198)

Resource Information

URL: <http://athina.biol.uoa.gr/bioinformatics/mcmbb/>

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Description: A web tool used in the discrimination of beta-barrel outer membrane proteins with a Markov chain model. MCMBB is a fast algorithm, which discriminates beta-barrel outer membrane proteins from globular proteins and from alpha-helical membrane proteins. The algorithm is based on a 1st order Markov Chain model, which captures the alternating pattern of hydrophilic-hydrophobic residues occurring in the membrane-spanning beta-strands of beta-barrel outer membrane proteins. The model achieves high accuracy in discriminating outer membrane proteins, since it can discriminate beta-barrel outer membrane with a correct classification rate of 90.08% and the globular proteins with a correct classification rate of 92.67%. When submitting alpha-helical membrane proteins, the method shows an accuracy of 100%. A score greater than zero, indicates that the protein is more likely to be a beta-barrel outer membrane protein, whereas a result lower than zero, indicates that the protein is probable not a beta-barrel. You may enter up to 1000 sequences in Fasta format.

Abbreviations: MCMBB

Synonyms: MCMBB: Markov Chain Model for Beta Barrels

Resource Type: analysis service resource, data analysis service, production service resource, service resource

Keywords: algorithm, beta-barrel outer membrane protein, globular protein, alpha-helical membrane protein, markov chain model, beta-barrel, protein, outer membrane protein, classification, fasta, model

Availability: Acknowledgement requested

Resource Name: MCMBB

Resource ID: SCR_006198

Alternate IDs: nlx_151742

Record Creation Time: 20220129T080234+0000

Record Last Update: 20260905T133134+0000

Ratings and Alerts

No rating or validation information has been found for MCMBB.

No alerts have been found for MCMBB.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 2 mentions in open access literature.

Listed below are recent publications. The full list is available at [Kravitz](#) .

Kamaruzaman INA, et al. (2024) Characterisation of Putative Outer Membrane Proteins from *Leptospira borgpetersenii* Serovar Hardjo-Bovis Identifies Novel Adhesins and Diversity in Adhesion across Genomospecies Orthologs. *Microorganisms*, 12(2).

Rahbar MR, et al. (2022) A unique antigen against SARS-CoV-2, *Acinetobacter baumannii*, and *Pseudomonas aeruginosa*. *Scientific reports*, 12(1), 10852.