# **Resource Summary Report**

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## **MCMBB**

RRID:SCR 006198

Type: Tool

### **Proper Citation**

MCMBB (RRID:SCR\_006198)

#### Resource Information

**URL:** <a href="http://athina.biol.uoa.gr/bioinformatics/mcmbb/">http://athina.biol.uoa.gr/bioinformatics/mcmbb/</a>

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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:** production service resource, data analysis service, analysis service resource. service resource

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**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

#### **Funding:**

Availability: Acknowledgement requested

Resource Name: MCMBB

Resource ID: SCR\_006198

Alternate IDs: nlx\_151742

**Record Creation Time:** 20220129T080234+0000

**Record Last Update:** 20250429T055037+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 1 mentions in open access literature.

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

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).