

- Search for 1MBN and press “Go”. This opens the entry entitled “The stereochemistry of the protein myoglobin”. Myoglobin was the first protein structure ever solved.
- The page provides a lot of information about the structure, including when it was deposited into the database, how the structure was determined, and what small molecules are present in the structure. It will often provide a citation to a scientific article with more detail.

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159230 Biological Macromolecular Structures Enabling Breakthroughs in Research and Education

Search by PDB ID, author, macromolecule, sequence, or ligands Go

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PDB-101 WORLDWIDE PDB EMDataResource NOVELLE ACID DATABASE Worldwide Protein Data Bank Foundation

Structure Summary 3D View Annotations Sequence Sequence Similarity Structure Similarity Experiment

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1MBN

The stereochemistry of the protein myoglobin

DOI: [10.2210/pdb1MBN/pdb](https://doi.org/10.2210/pdb1MBN/pdb)

Classification: [OXYGEN STORAGE](#)

Organism(s): [Physeter macrocephalus](#)

Deposited: 1973-04-05 Released: 1976-05-19

Deposition Author(s): [Watson, H.C.](#), [Kendrew, J.C.](#)

Experimental Data Snapshot

Method: X-RAY DIFFRACTION

Resolution: 2 Å

3D View: [Structure](#) | [Ligand Interaction](#)

wwPDB Validation 3D Report Full Report

Metric	Percentile Ranks	Value
Clashscore		54
Ramachandran outliers		3.3%
Sidechain outliers		15.2%

Worse Better

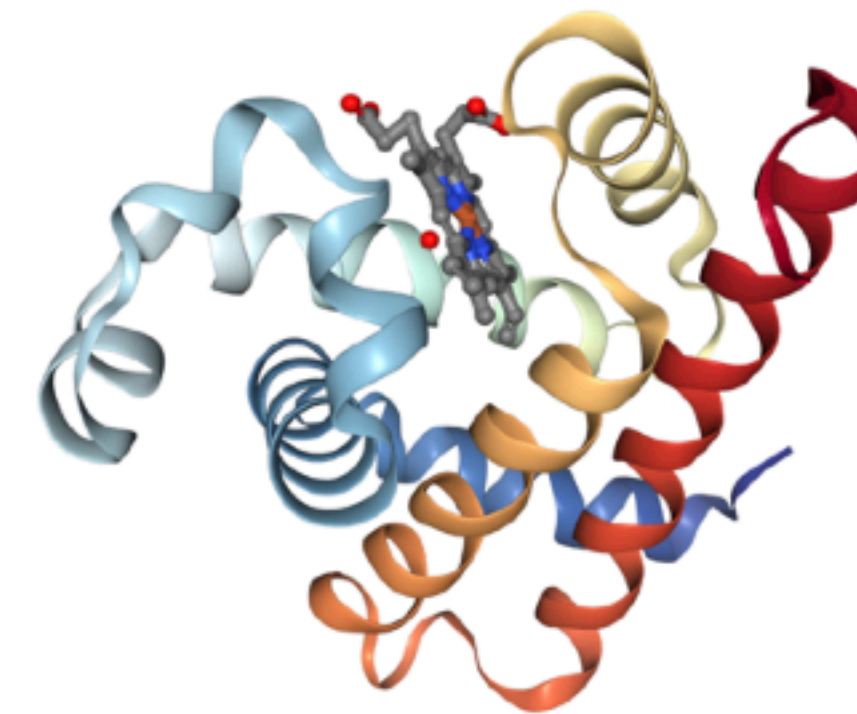
■ Percentile relative to all X-ray structures
□ Percentile relative to X-ray structures of similar resolution

- Click on the “3D View” tab. This should open the structure using the program NGL.
- NGL allows you to interactively move the molecule and change its representation. Try rotating the molecule and zooming in and out.
- By default the protein is in a “Cartoon” style and colored by “Rainbow”. I will describe the advantages of this representation a bit later.

1MBN

The stereochemistry of the protein myoglobin

Note: Use your mouse to drag, rotate, and zoom in and out of the structure. Mouse-over to identify atoms and bonds. [Mouse controls documentation](#).



Spin Center Fullscreen Screenshot Perspective Camera White background Focus 0

NGL is a WebGL based 3D viewer powered by MMTF.

Select a different viewer NGL (WebGL)

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Structure View Electron Density Maps Ligand View

[Structure View Documentation](#)

Assembly Bioassembly 1

Model Model 1

Symmetry None

Style Cartoon

Color Rainbow

Ligand Ball & Stick

Quality Automatic

Water ☐ Ions ☒

Hydrogens ☒ Clashes ☐

Default Structure View

N-terminus

C-terminus

Rainbow - blue is the N-terminus and red is the C-terminus