

Running MitoProt from gene record pages.

MitoProt II software predicts mitochondrion-related proteins by calculating the N-terminal protein region that can support a Mitochondrial Targeting Sequence (MTS) and the cleavage site.

1. **Navigate to a gene record page of your choice (e.g. PF3D7_0214200 gene of *Plasmodium falciparum* 3D7:**
http://plasmodb.org/plasmo/app/record/gene/PF3D7_0214200)
2. Use the **Contents** menu to navigate to the **Protein features and properties menu**

The image shows a two-part screenshot of the Plasmodb.org website. The top part displays the gene record for PF3D7_1202200, a mitochondrial phosphate carrier protein. It includes fields for Name (MPC), Type (protein coding), Chromosome (12), Location, Species (Plasmodium falciparum), Strain (3D7), and Status (Curated Reference Strain). A 'Contents' menu on the left lists various sections, with '14 Protein features and properties' highlighted in a pink box. A pink curved arrow points from this menu item to the bottom part of the screenshot. The bottom part shows the '13 Protein features and properties' section, which includes links for BLASTP, InterPro Domains, MitoProt, Proteins Properties and Features, and WoLFPSORT. The 'Contents' menu on the left in this section also has '13 Protein features and properties' selected.

PF3D7_1202200 mitochondrial phosphate carrier protein

Name: MPC
Type: protein coding
Chromosome: 12
Location: PF3D7_12_v3:116,475..117,449(-)
Species: Plasmodium falciparum
Strain: 3D7
Status: Curated Reference Strain

View this gene at GeneDB
View 1 user comment, or add a comment

GeneDB curates, researches and improves this genome, and will incorporate appropriate User Comments into the official annotation. If you wish to publish whole genome or large-scale analyses, please contact the primary investigator or use the published version in the PlasmoDB version 5.3 download folder.

Shortcuts

Synteny BLAT Alignments SNPs Transcriptomics Protein Features Proteomics

Also see PF3D7_1202200 in the Genome Browser or Protein Browser

Contents

expand all | collapse all

Search section names...

- 1 Gene models
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- 8 Phenotype
- 9 Genetic variation
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- 11 Sequence analysis
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- 14 Protein features and properties
- 15 Function prediction

1 Gene models

Exons in Gene 1

Transcripts 1

▼ Gene Models

View in genome browser

PF3D7_12_v3

116.3k 116.4k 116.5k 116.6k 116.7k 116.8k 116.9k 117k 117.1k 117.2k 117.3k 117.4k 117.5k 117.6k

Annotated Transcripts (UTRs in gray when available)

PF3D7_1202200.1 (MPC)

RNASeq evidence for: introns (filtered)

Novel

Contents

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- 8 Genetic variation
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- 9 Transcriptomics
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13 Protein features and properties

- BLASTP (protein-protein BLAST)
- InterPro Domains Download Data sets
- MitoProt
- Proteins Properties and Features Download Data sets
- WoLFPSORT

14 Function prediction

3. Select the **MitoProt** and click on the **Submit** button to initiate a query:

▼ MitoProt

Submit

For more information about this tool [click here](#)

4. A new tab will be opened automatically to redirect you to the MitoProt II results page:

MitoProt II - v1.101					
Input sequence length : 324 aa					
VALUES OF COMPUTED PARAMETERS					
Net charge of query sequence	:			+20	
Analysed region	:			5	
Number of basic residues in targeting sequence	:			3	
Number of acidic residues in targeting sequence	:			0	
Cleavage site	:			not predictable	
Cleaved sequence	:				
HYDROPHOBIC SCALE USED					
		GES	KD	GVH1	ECS
H17	:	1.841	1.729	0.436	0.678
MesoH	:	-0.095	0.485	-0.272	0.280
MuHd_075	:	28.849	21.784	6.901	7.198
MuHd_095	:	21.271	12.107	3.963	5.614
MuHd_100	:	22.870	12.219	4.139	6.504
MuHd_105	:	16.263	9.299	3.686	5.568
Hmax_075	:	6.000	9.300	-1.405	3.500
Hmax_095	:	-3.238	3.150	-3.095	1.155
Hmax_100	:	-3.600	4.300	-3.454	2.190
Hmax_105	:	-3.733	3.267	-3.167	1.670
PROBABILITY					
of export to mitochondria: 0.7312					

Useful links:

1. MitoProt II: <https://ihg.gsf.de/ihg/mitoprot.html>
2. MitoProt II Help page (including parameter descriptions):
<https://ihg.gsf.de/ihg/mitophelp.html>: <https://ihg.gsf.de/ihg/mitophelp.html>