

LAMPIRAN

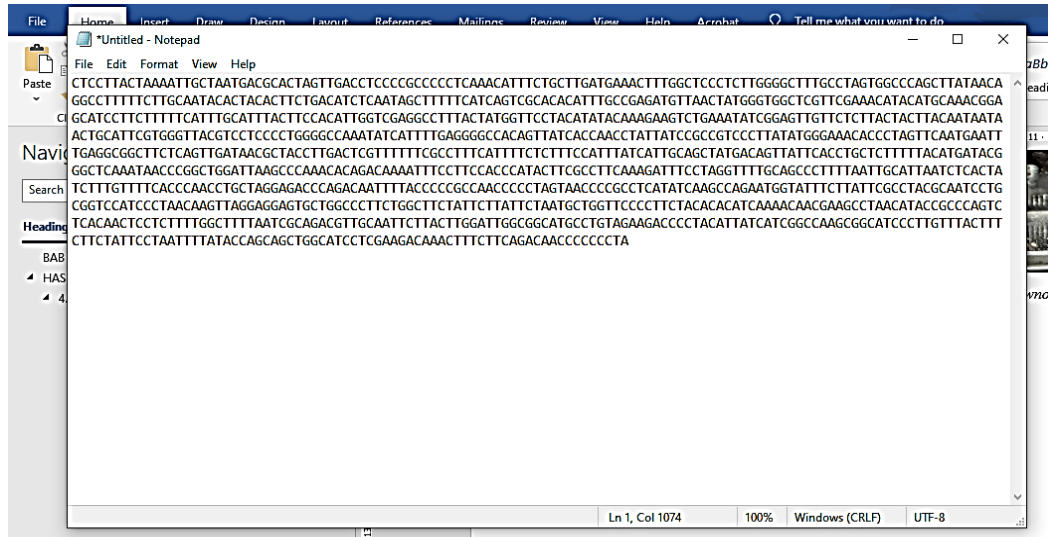
Lampiran 1.1 Jadwal Pelaksanaan Penelitian

No	Kegiatan	Okt	Nov	Des	Jan	Feb	Mar	Apr	Mei	jun
1.	Pengajuan judul									
2.	Pengajuan Proposal									
3.	Seminar Proposal									
4.	Pengambilan Sampel									
5.	Proses Ekstraksi DNA									
6.	Analisis Data									
7.	Sidang Skripsi									

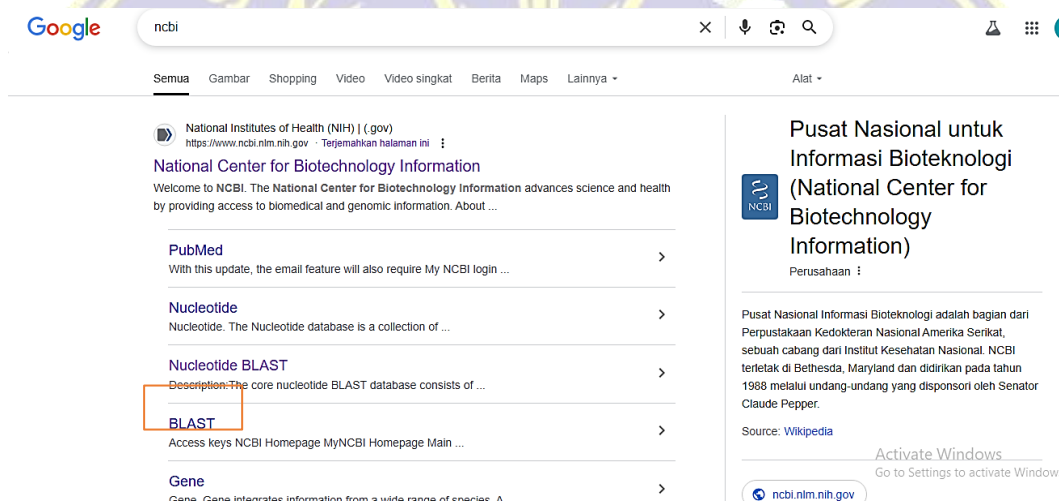
Lampiran 1.2 Sampel *Betta brownorum*



Lampiran 1.3 Cara kerja analisis komposisi nukleotida *Betta brownorum*



Keterangan: Membuka notepad lalu menyalin hasil sekuensing di lembar notepad



Keterangan: Membuka Google lalu menuliskan <https://www.ncbi.nlm.nih.gov>, kemudian memilih BLAST.


Effective August 2025, the **ClusteredNR** database will become the default Protein BLAST database. [Learn more about ClusteredNR](#)

Basic Local Alignment Search Tool

BLAST finds regions of similarity between biological sequences. The program compares nucleotide or protein sequences to sequence databases and calculates the statistical significance. [Learn more](#)

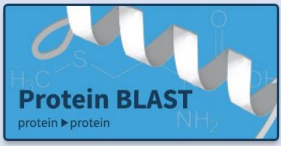
Mon, 17 Mar 2025
Improvements include upgrading to GCP Artifact Registry and better handling of job completion status in kubernetes version 1.30+.
ElasticBLAST 1.4.0 is now available! [More BLAST news...](#)

Web BLAST



blastx
translated nucleotide > protein

tblastn
protein > translated nucleotide



Keterangan: Memilih menu Nukleotide BLAST.

BLAST [»](#) [blastn suite](#) Home Recent Results Saved Strategies Help

Important update
Effective August 2025, the **ClusteredNR** database will become the default Protein BLAST database. [Learn more about ClusteredNR](#)

Standard Nucleotide BLAST

[blastn](#) [blastp](#) [blastx](#) [tblastn](#) [tblastx](#)

BLASTn programs search nucleotide databases using a nucleotide query, more... [Reset page](#) [Bookmark](#)

Enter Query Sequence

Enter accession number(s), gi(s), or FASTA sequence(s) [Clear](#)

CAATTCTTACTTGGATTGGCGCATGCGCTGTAGAGACCCCTACATTATCA
TGGGCCAAGCGGCATCCCTTGTTCCTTCTTCTATTCTTAATTATACCA
GCAGCTGGCATCCTCGAAGACAACTTCTTCAGACACCCCTTAATA

Query subrange [?](#)
From
To

Or, upload file No file chosen [?](#)

Job Title
Enter a descriptive title for your BLAST search [?](#)

☐ Align two or more sequences [?](#)

Choose Search Set

Database ☒ Standard databases (nr etc.) ☐ rRNA/ITS databases ☐ Genomic + transcript databases ☐ Betacoronavirus ☐ Experimental databases

Core nucleotide database (core nt) [?](#)

Organism [Optional](#)
Enter organism name or id—completions will be suggested ☐ exclude [Add Organism](#)
Enter organism common name, binomial, or tax id. Only 20 top taxa will be shown [?](#)

Exclude [Optional](#)
☐ Models (XM/XP) ☐ Uncultured/environmental sample sequences

Limit to [Optional](#)
☐ Sequences from type material

Entrez Query [Optional](#)
Enter an Entrez query to limit search [?](#) [YouTube](#) [Create custom database](#)

Program Selection

Optimize for ☒ Highly similar sequences (megablast) ☐ More dissimilar sequences (discontiguous megablast) ☐ Somewhat similar sequences (blastn)
Choose a BLAST algorithm [?](#)

BLAST Search database core_nt using Megablast (Optimize for highly similar sequences)
☐ Show results in a new window

[+ Algorithm parameters](#)

[Feedback](#)

Keterangan: Menyalin hasil sekuensing di kolom pencarian.

Effective August 2025, the **ClusteredNR** database will become the default Protein BLAST database. [Learn more about ClusteredNR](#)

Standard Nucleotide BLAST

[blastn](#) [blastp](#) [blastx](#) [tblastn](#) [tblastx](#)

BLASTn programs search nucleotide databases using a nucleotide query, more... [Reset page](#) [Bookmark](#)

Enter Query Sequence

Enter accession number(s), gi(s), or FASTA sequence(s) [Clear](#)

CAATTCTTACTTGGATTGGCGCATGCGCTGTAGAGACCCCTACATTATCA
TGGGCCAAGCGGCATCCCTTGTTCCTTCTTCTATTCTTAATTATACCA
GCAGCTGGCATCCTCGAAGACAACTTCTTCAGACACCCCTTAATA

Query subrange [?](#)
From
To

Or, upload file No file chosen [?](#)

Job Title
Enter a descriptive title for your BLAST search [?](#)

☐ Align two or more sequences [?](#)

Choose Search Set

Database ☒ Standard databases (nr etc.) ☐ rRNA/ITS databases ☐ Genomic + transcript databases ☐ Betacoronavirus ☐ Experimental databases

Core nucleotide database (core nt) [?](#)

Organism [Optional](#)
Enter organism name or id—completions will be suggested ☐ exclude [Add Organism](#)
Enter organism common name, binomial, or tax id. Only 20 top taxa will be shown [?](#)

Exclude [Optional](#)
☐ Models (XM/XP) ☐ Uncultured/environmental sample sequences

Limit to [Optional](#)
☐ Sequences from type material

Entrez Query [Optional](#)
Enter an Entrez query to limit search [?](#) [YouTube](#) [Create custom database](#)

Program Selection

Optimize for ☒ Highly similar sequences (megablast) ☐ More dissimilar sequences (discontiguous megablast) ☐ Somewhat similar sequences (blastn)
Choose a BLAST algorithm [?](#)

BLAST Search database core_nt using Megablast (Optimize for highly similar sequences)
☐ Show results in a new window

[+ Algorithm parameters](#)

[Feedback](#)

Keterangan: Mengklik BLAST.

Important update
Effective August 2025, the **ClusteredNR** database will become the default Protein BLAST database. [Learn more about ClusteredNR](#)

Thank you for using ClusteredNR
Please share your [feedback](#).

[← Edit Search](#) [Save Search](#) [Search Summary](#) [How to read this report?](#) [BLAST Help Videos](#) [Back to Traditional Results Page](#)

Job Title **Nucleotide Sequence**

RID **3XSED0P0016** Search expires on 06-04 19:51 pm [Download All](#)

Program **BLASTN** [Citation](#)

Database **core_nt** [See details](#)

Query ID **lcl|Query_7290047**

Description **None**

Molecule type **dna**

Query Length **1123**

Other reports [Distance tree of results](#) [MSA viewer](#)

Filter Results

Organism only top 20 will appear ☐ exclude
Type common name, binomial, taxid or group name
[+ Add organism](#)

Percent Identity to E value to Query Coverage to

[Filter](#) [Reset](#)

Descriptions [Graphic Summary](#) [Alignments](#) [Taxonomy](#)

Keterangan: Mendapatkan hasil panjang nukleotida

Other reports [Distance tree of results](#) [MSA viewer](#) [Filter](#) [Reset](#)

Sequences producing significant alignments [Download](#) [Select columns](#) [Show 100](#)

☒ select all 100 sequences selected

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
<input checked="" type="checkbox"/> Betta rutilans isolate B207 cytochrome b (cytb) gene, complete cds, and tRNA-Thr gene, partial sequence, mito...	Betta rutilans	1917	1917	100%	0.0	97.43%	1163	AF519682.1
<input checked="" type="checkbox"/> Betta rutilans isolate LR4856 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta rutilans	1917	1917	98%	0.0	98.09%	1134	KF203905.1
<input checked="" type="checkbox"/> Betta rutilans isolate LR4857 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta rutilans	1882	1882	95%	0.0	98.41%	1104	KF203906.1
<input checked="" type="checkbox"/> Betta rutilans isolate sge9 cytochrome b (Cytb) gene, partial cds, mitochondrial	Betta rutilans	1827	1827	93%	0.0	98.37%	1047	OQ296602.1
<input checked="" type="checkbox"/> Betta rutilans isolate sge10 cytochrome b (Cytb) gene, partial cds, mitochondrial	Betta rutilans	1827	1827	93%	0.0	98.37%	1047	OQ296603.1
<input checked="" type="checkbox"/> Betta rutilans isolate sge11 cytochrome b (Cytb) gene, partial cds, mitochondrial	Betta rutilans	1827	1827	93%	0.0	98.37%	1047	OQ296604.1
<input checked="" type="checkbox"/> Betta rutilans isolate sge12 cytochrome b (Cytb) gene, partial cds, mitochondrial	Betta rutilans	1827	1827	93%	0.0	98.37%	1047	OQ296605.1
<input checked="" type="checkbox"/> Betta rutilans isolate sge13 cytochrome b (Cytb) gene, partial cds, mitochondrial	Betta rutilans	1821	1821	93%	0.0	98.27%	1047	OQ296606.1
<input checked="" type="checkbox"/> Betta brownorum isolate LR4849 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta brownorum	1784	1784	98%	0.0	95.92%	1134	KF203749.1
<input checked="" type="checkbox"/> Betta brownorum isolate LR4848 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta brownorum	1779	1779	98%	0.0	95.83%	1134	KF203748.1
<input checked="" type="checkbox"/> Betta brownorum isolate LR4847 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta brownorum	1762	1762	98%	0.0	95.55%	1134	KF203747.1
<input checked="" type="checkbox"/> Betta brownorum isolate LR0282 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta brownorum	1757	1757	98%	0.0	95.46%	1134	KF203744.1
<input checked="" type="checkbox"/> Betta brownorum isolate R150 cytochrome b (CYTB) gene, partial cds, mitochondrial	Betta brownorum	1735	1735	98%	0.0	95.10%	1134	KF203743.1

Keterangan: Menggeser halaman ke bawah lalu menyalin Accession yang dikehendaki

An official website of the United States government [Here's how you know](#)

NIH National Library of Medicine
National Center for Biotechnology Information

[Log in](#)

All Databases

- Books
- ClinVar
- Conserved Domains
- dbGaP
- dbVar
- Gene
- Genome
- GEO DataSets
- GEO Profiles
- GTR
- Identical Protein Groups
- MedGen
- MeSH
- NLM Catalog
- Nucleotide
- OMIM
- PMC
- Protein
- Protein Clusters
- Protein Family Models

NCBI
National Center for Biotechnology Information advances science and health by providing access to genomic information.

[Mission](#) | [Organization](#) | [NCBI News & Blog](#)

Submit
Submit manuscripts and code to public databases

Download
Transfer NCBI data to your computer

Learn
Find help documents, attend a class or watch a tutorial

Analyze
Identify an NCBI tool for your data analysis task

Research
Explore NCBI research and collaborative projects

Popular Resources

- PubMed
- Bookshelf
- PubMed Central
- BLAST
- Nucleotide
- Genome
- SNP
- Gene
- Protein
- PubChem

NCBI News & Blog

GenBank Release 266.0 Now Available! (19 Jun 2025)
GenBank release 266.0 (19 Jun 2025) now available on the NCBI FTP site. The Windows release has 44.07 trillion bases and 5.68 million proteins.

NCBI ALFA Release 4 Now Available

Keterangan: Membuka Google lalu menuliskan ncbi.nlm.nih.gov, lalu mengganti all databases menjadi nucleotides.

NIH National Library of Medicine
National Center for Biotechnology Information

Nucleotide search: **beta rutilans cytb**

Summary: 20 per page, Sort by Default order

Items: 9

- Betta rutilans isolate sge14 cytochrome b (Cytb) gene, partial cds: mitochondrial**
1,047 bp linear DNA
Accession: OQ296607.1 GI: 2519790370
[Protein](#) [Taxonomy](#)
[GenBank](#) [FASTA](#) [Graphics](#)
- Betta rutilans isolate sge13 cytochrome b (Cytb) gene, partial cds: mitochondrial**
1,047 bp linear DNA
Accession: OQ296606.1 GI: 2519790368
[Protein](#) [Taxonomy](#)
[GenBank](#) [FASTA](#) [Graphics](#)
- Betta rutilans isolate sge12 cytochrome b (Cytb) gene, partial cds: mitochondrial**
1,047 bp linear DNA

Search details: ("Betta rutilans"[Organism] OR betta rutilans[all Fields]) AND cytb[all Fields]

Keterangan: Menulis nama spesies yang dicari pada kolom pencarian lalu menyalin Accession

NIH National Library of Medicine
National Center for Biotechnology Information

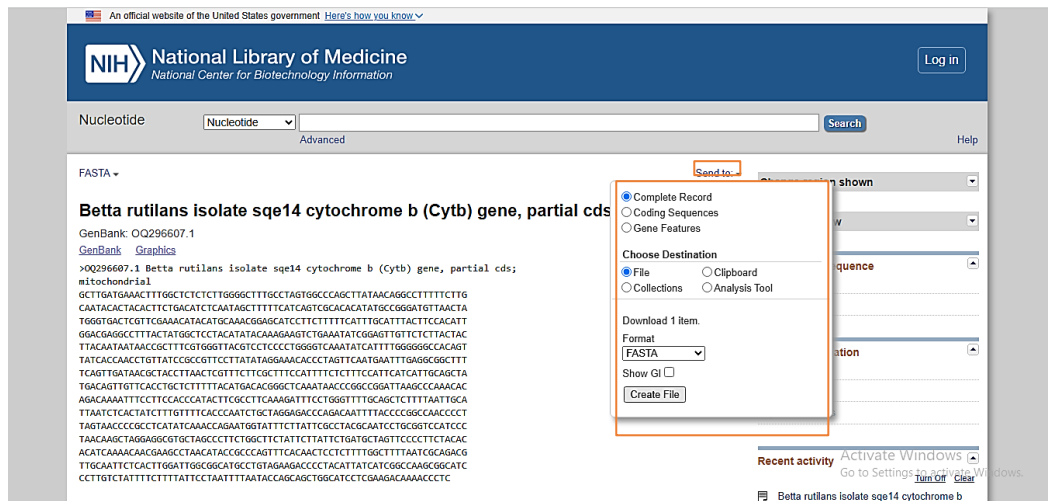
Nucleotide search: **K203905.1**

GenBank: K203905.1
[FASTA](#) [Graphics](#)

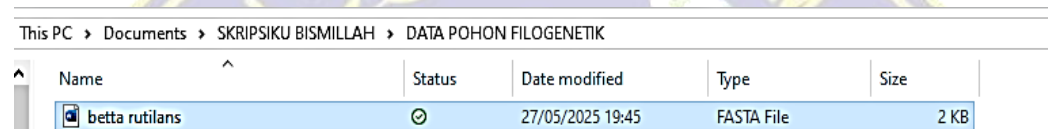
Betta rutilans isolate LR4856 cytochrome b (CYTB) gene, partial cds; mitochondrial

LOCUS K203905 1134 bp DNA linear VRT 01-MAY-2019
DEFINITION Betta rutilans isolate LR4856 cytochrome b (CYTB) gene, partial cds; mitochondrial.
ACCESSION K203905
VERSION K203905.1
KEYWORDS
SOURCE mitochondrion Betta rutilans
ORGANISM Betta rutilans
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Neoteleostei; Acanthomorphata; Anabantaria; Anabantiformes; Anabantoidae; Osphronemidae; Betta.
REFERENCE 1 (bases 1 to 1134)
AUTHORS Lavoue,S., Britz,R., Tan,H.H., Yaakob,N. and Ruber,L.

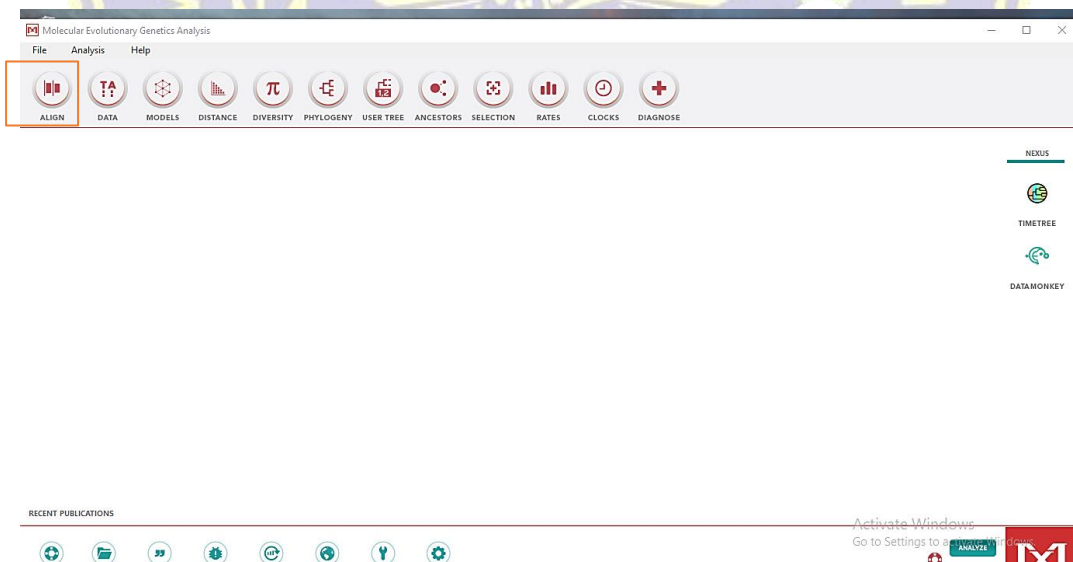
Keterangan: Menyalin Accession pada kolom pencarian lalu mengklik FASTA



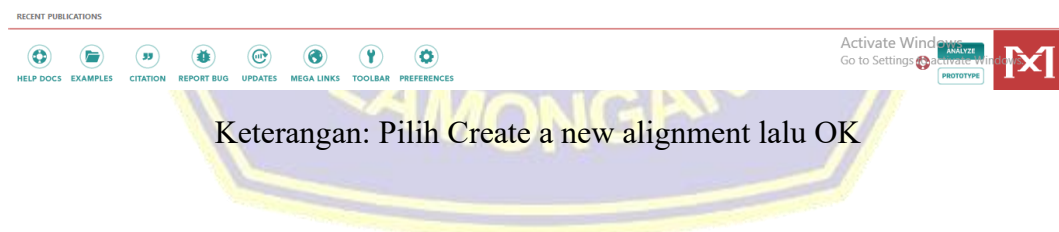
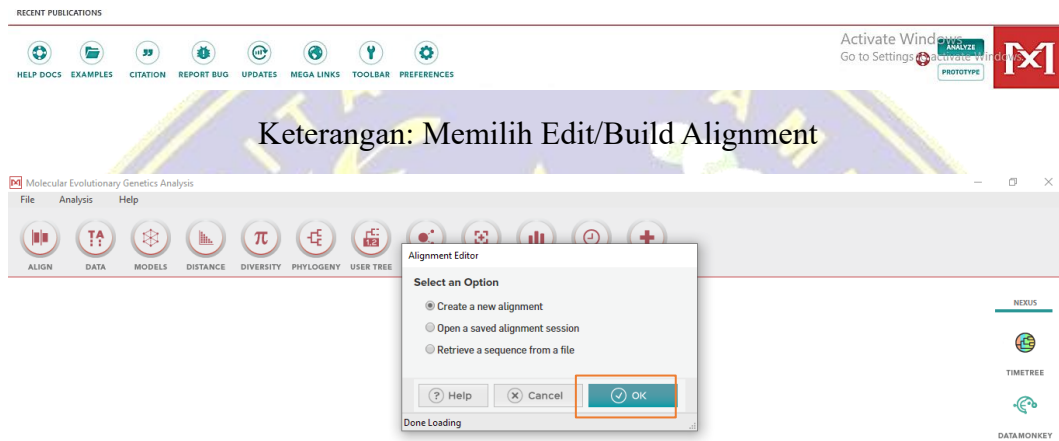
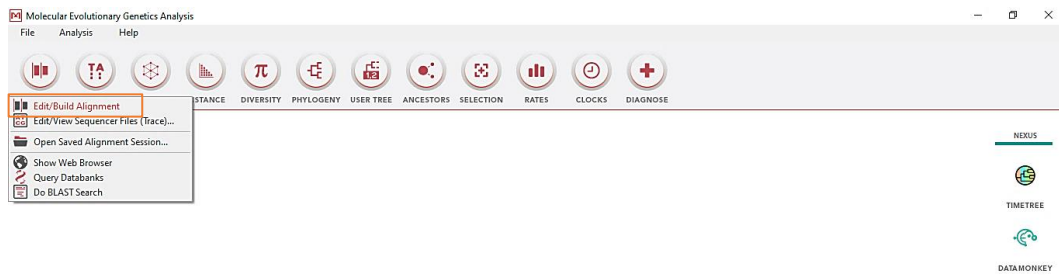
Keterangan: Memilih Send to, Complete Record, File, dan menyimpannya dalam format FASTA kemudian klik Create file



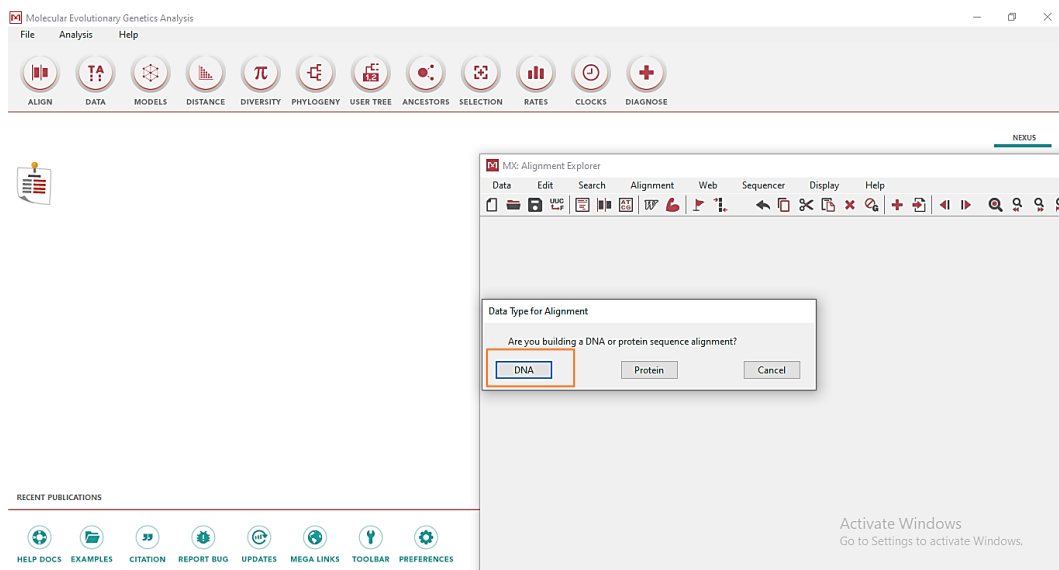
Keterangan: Menyimpan file dengan format fasta dan memberikan nama sesuai dengan nama spesies.



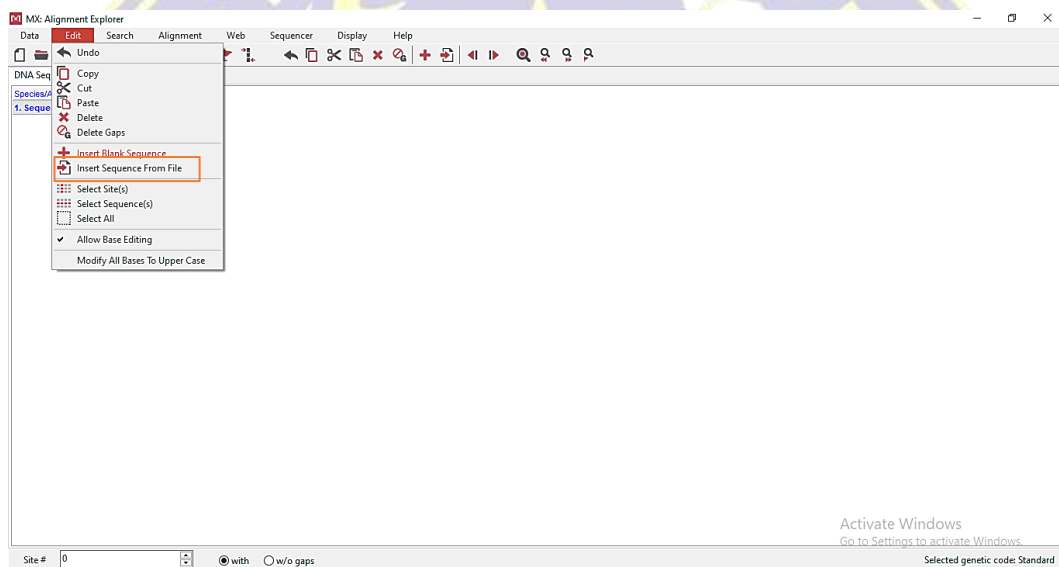
Keterangan: Buka aplikasi MEGA 10 dan memilih menu Align.



Keterangan: Pilih Create a new alignment lalu OK



Keterangan: Memilih pilihan DNA



Keterangan: Memilih menu edit lalu memilih Insert Sequences From File lalu pilih file sekuens dengan format FASTA.

MX: Alignment Explorer

Alignment Web Sequencer Display Help

DNA Sequences Translated Protein Sequences

Species/Abbrev

1. Betta brownorum | Borneo

2. Betta brownorum | Borneo

3. Betta brownorum | Borneo

4. Betta brownorum | Borneo

5. Betta brownorum | Borneo

6. Betta brownorum | Borneo

7. Betta brownorum | Borneo

8. Betta brownorum | Borneo

9. Betta brownorum | Borneo

10. Betta rutilans - 1

11. Betta rutilans - 2

12. Betta rutilans - 3

13. Betta rutilans - 4

14. Betta rutilans - 5

15. Betta rutilans - 6

16. Betta rutilans - 7

17. Betta rutilans - 8

18. Betta uberis | Kalimantan

19. Betta burdigala | Pulau Bangka

20. Betta livida | Malaysia

21. Betta ides | Kalimantan Selatan

22. Betta compuncta | Kalimantan Timur

23. Betta medea | Kalimantan Barat

24. Betta ocellata | Kalimantan Timur

25. Betta coccinea | Sumatra

26. Betta alarensis | Borneo

27. Betta enisei | Kalimantan Barat

28. Betta foerschi | Borneo

29. Betta kratois | Kalimantan Barat

30. Betta pugnax | Malaysia

31. Betta mandor | Kalimantan Barat

Site # 1

with w/o gaps

Selected genetic code: Standard

Keterangan: Memilih menu Alignment

MX: Alignment Explorer

Alignment Web Sequencer Display Help

DNA Sequences Translated Protein Sequences

Species/Abbrev

1. Betta brownorum | Borneo

2. Betta brownorum | Borneo

3. Betta brownorum | Borneo

4. Betta brownorum | Borneo

5. Betta brownorum | Borneo

6. Betta brownorum | Borneo

7. Betta brownorum | Borneo

8. Betta brownorum | Borneo

9. Betta brownorum | Borneo

10. Betta rutilans - 1

11. Betta rutilans - 2

12. Betta rutilans - 3

13. Betta rutilans - 4

14. Betta rutilans - 5

15. Betta rutilans - 6

16. Betta rutilans - 7

17. Betta rutilans - 8

18. Betta uberis | Kalimantan

19. Betta burdigala | Pulau Bangka

20. Betta livida | Malaysia

21. Betta ides | Kalimantan Selatan

22. Betta compuncta | Kalimantan Timur

23. Betta medea | Kalimantan Barat

24. Betta ocellata | Kalimantan Timur

25. Betta coccinea | Sumatra

26. Betta alarensis | Borneo

27. Betta enisei | Kalimantan Barat

28. Betta foerschi | Borneo

29. Betta kratois | Kalimantan Barat

30. Betta pugnax | Malaysia

31. Betta mandor | Kalimantan Barat

Site # 36

with w/o gaps

Selected genetic code: Standard

Keterangan : Mengklik kiri sekali pada salah satu basa nukleotida lalu mengklik Ctrl+A, lalu memilih Align by ClustalW.

MG Alignment Explorer

Species/Abbrev

1. Beta brownorum | Borneo

2. Beta brownorum 2

3. Beta brownorum 3

4. Beta brownorum 4

5. Beta brownorum 5

6. Beta brownorum 6

7. Beta brownorum 7

8. Beta brownorum 8

9. Beta brownorum 9

10. Beta rutilans - 1

11. Beta rutilans - 2

12. Beta rutilans - 3

13. Beta rutilans - 4

14. Beta rutilans - 5

15. Beta rutilans - 6

16. Beta rutilans - 7

17. Beta rutilans - 8

18. Beta uberis | Kalimantan

19. Beta burdigala | Pulau Bangka

20. Beta livida | Malaysia

21. Beta ideii | Kalimantan Selatan

22. Beta compuncta | Kalimantan Timur

23. Beta midis | Kalimantan Barat

24. Beta ocellata | Kalimantan Timur

25. Beta coccinea | Sumatra

26. Beta akarensis | Borneo

27. Beta enisei | Kalimantan Barat

28. Beta foerschii | Borneo

29. Beta kratois | Kalimantan Barat

30. Beta pugnas | Malaysia

31. Beta mandor | Kalimantan Barat

32. Helostoma temminckii

ClustalW Options

Alignment

Pairwise Alignment

Gap Opening Penalty: 15.00

Gap Extension Penalty: 6.66

Multiple Alignment

Gap Opening Penalty: 15.00

Gap Extension Penalty: 6.66

Matrix

Help Cancel OK

Done Loading

Go to Settings to activate Windows.

Selected genetic code: Standard

Keterangan: Mengklik OK.

MG Alignment Explorer

Species/Abbrev

4. Beta rutilans - 3

5. Beta rutilans - 4

6. Beta rutilans - 5

7. Beta rutilans - 6

8. Beta rutilans - 7

9. Beta rutilans - 8

10. Beta rutilans - 9

11. Beta rutilans - 1

12. Beta uberis | Kalimantan

13. Beta burdigala | Pulau Bangka

14. Beta livida | Malaysia

15. Beta ocellata | Kalimantan Timur

16. Beta compuncta | Kalimantan Timur

17. Beta midis | Kalimantan Barat

18. Beta ocellata | Kalimantan Timur

19. Beta coccinea | Sumatra

20. Beta brownorum 3

21. Beta brownorum 4

22. Beta brownorum 5

23. Beta brownorum 6

24. Beta brownorum 7

25. Beta brownorum 8

26. Beta brownorum 9

27. Beta akarensis | Borneo

28. Beta enisei | Kalimantan Barat

29. Beta foerschii | Borneo

30. Beta kratois | Kalimantan Barat

31. Beta pugnas | Malaysia

32. Beta mandor | Kalimantan Barat

33. Beta unimaculata | Kalimantan Timur

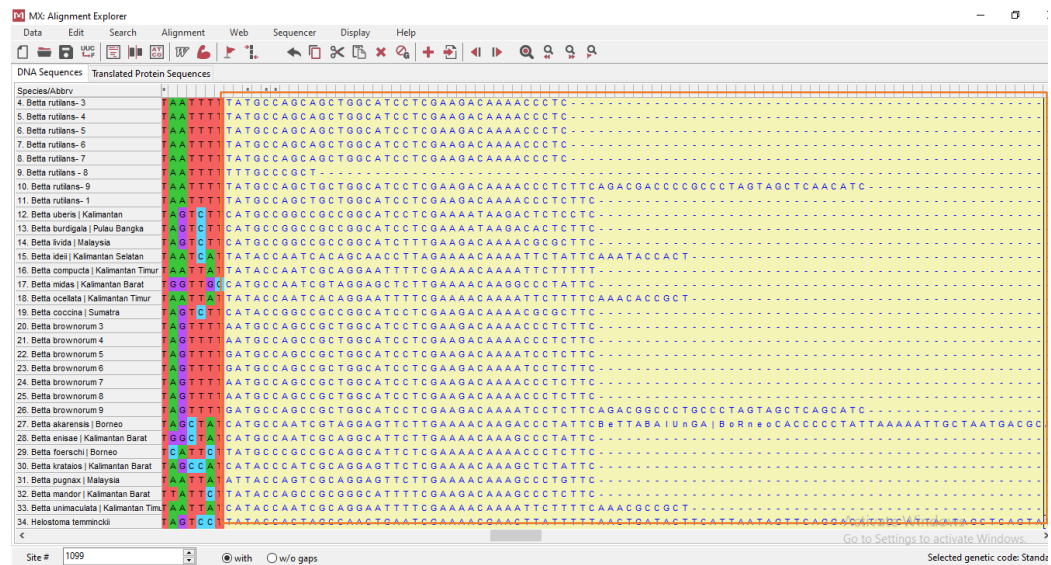
34. Helostoma temminckii

Site # 1

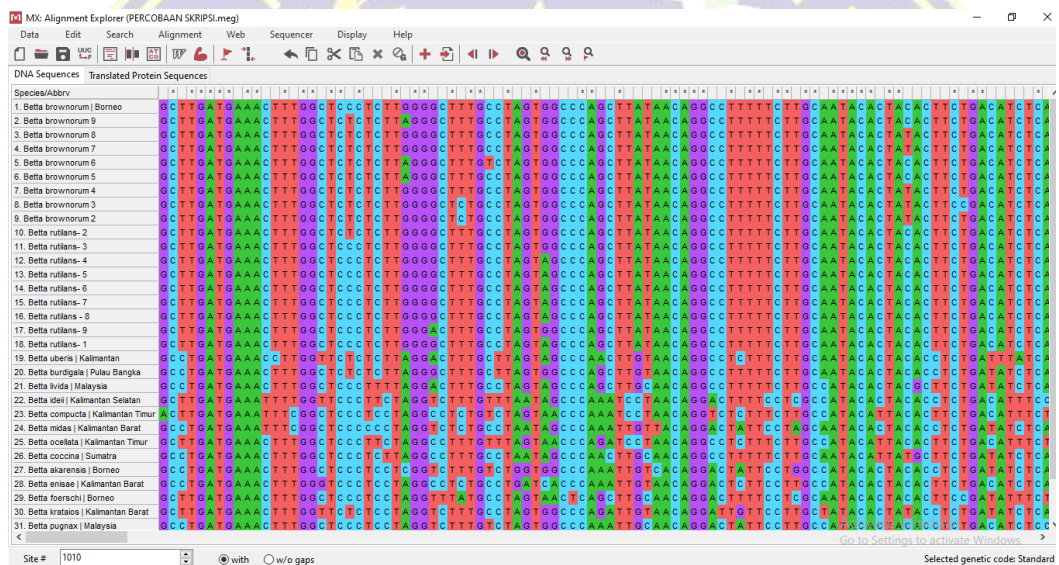
Go to Settings to activate Windows.

Selected genetic code: Standard

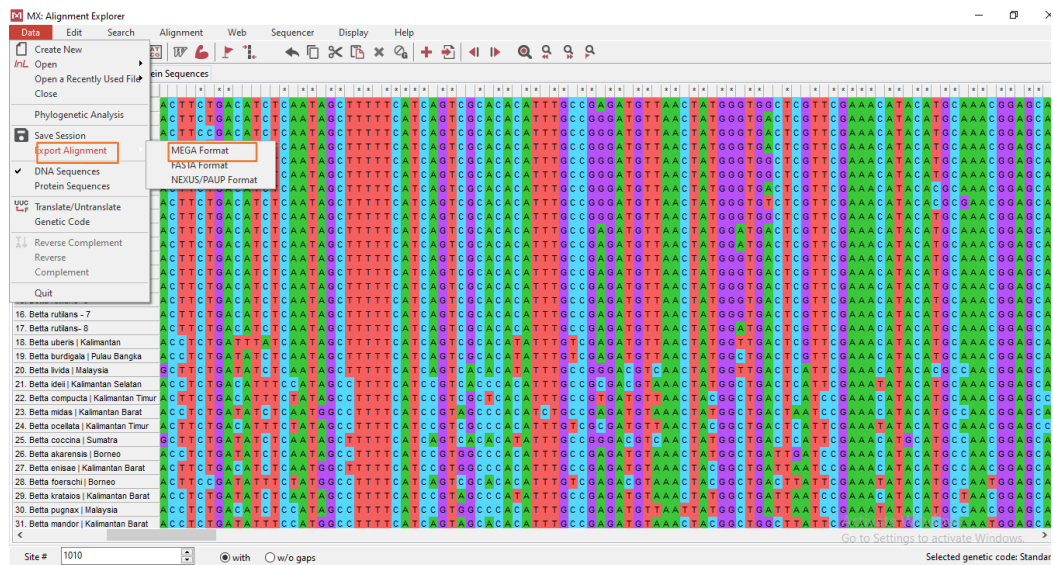
Keterangan: Memangkas kolom yang tidak terisi basa nukleotida di ujung kiri



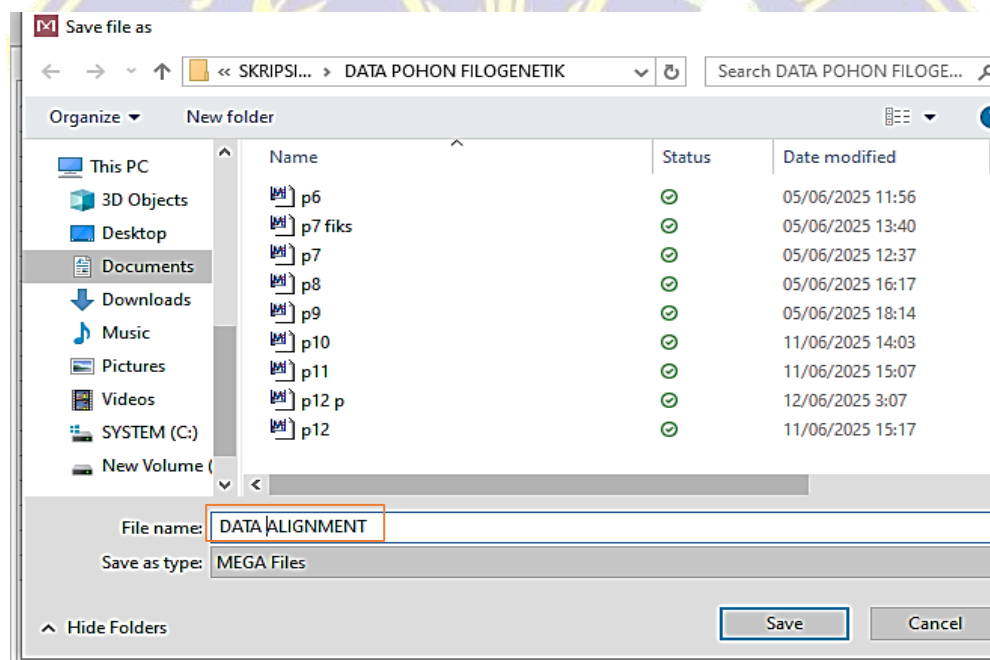
Keterangan: Memangkas kolom yang tidak terisi basa nukleotida di ujung kanan.



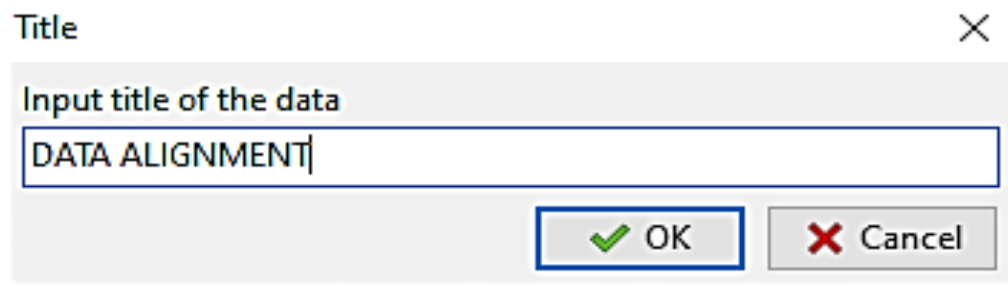
Keterangan: Hasil pensejajaran yang akan digunakan untuk analisis filogenetik, komposisi nukleotida, dan jarak genetik.



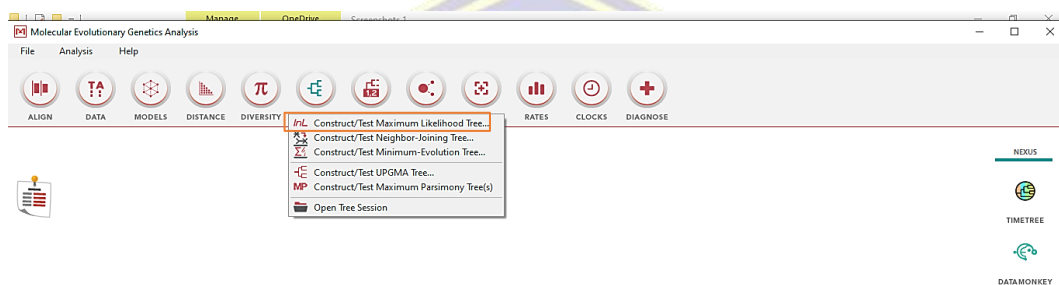
Keterangan: Memilih menu Data lalu Export Alignment dan memilih MEGA format.



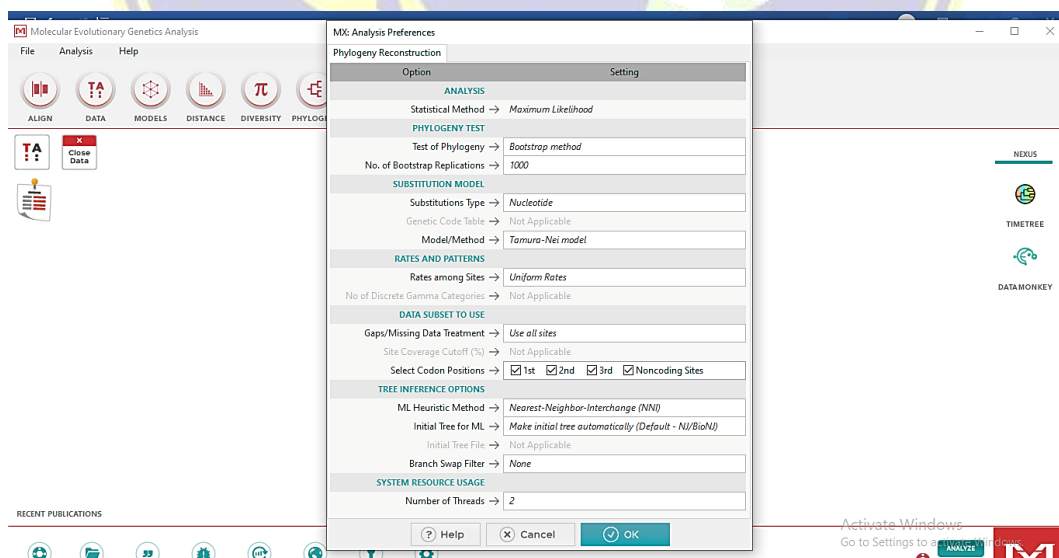
Keterangan: Memberikan nama pada hasil pensejajaran dengan format MEGA lalu Save.



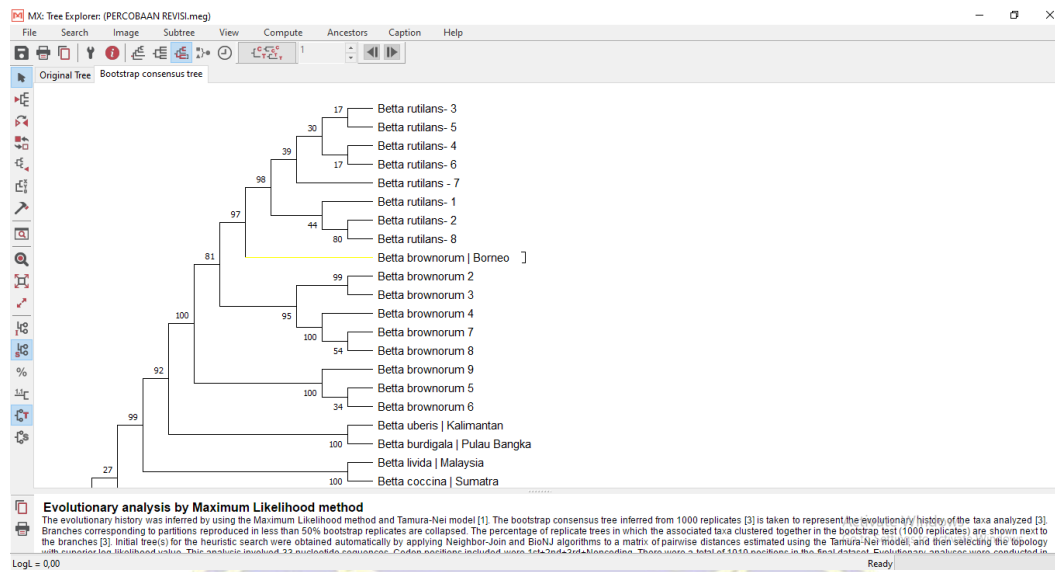
Keterangan: Menuliskan kembali nama hasil pensejajaran di kolom yang tersedia lalu OK.



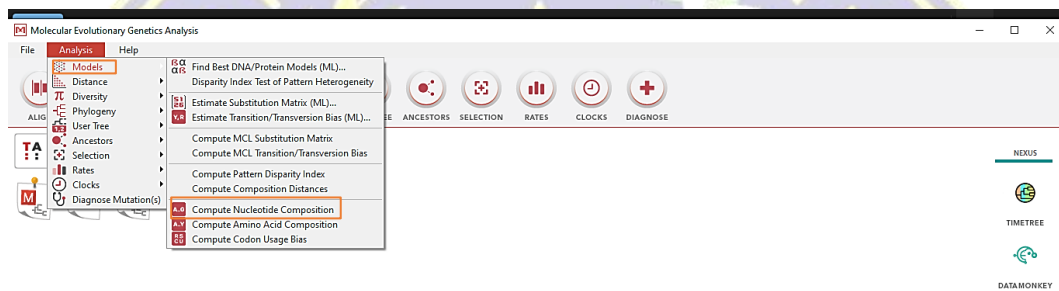
Keterangan: Memilih menu PHILOGENY lalu Construck/Test Maximum Likelihood Tree



Keterangan: Mengatur Phylogeny Reconstruction seperti gambar di atas lalu OK



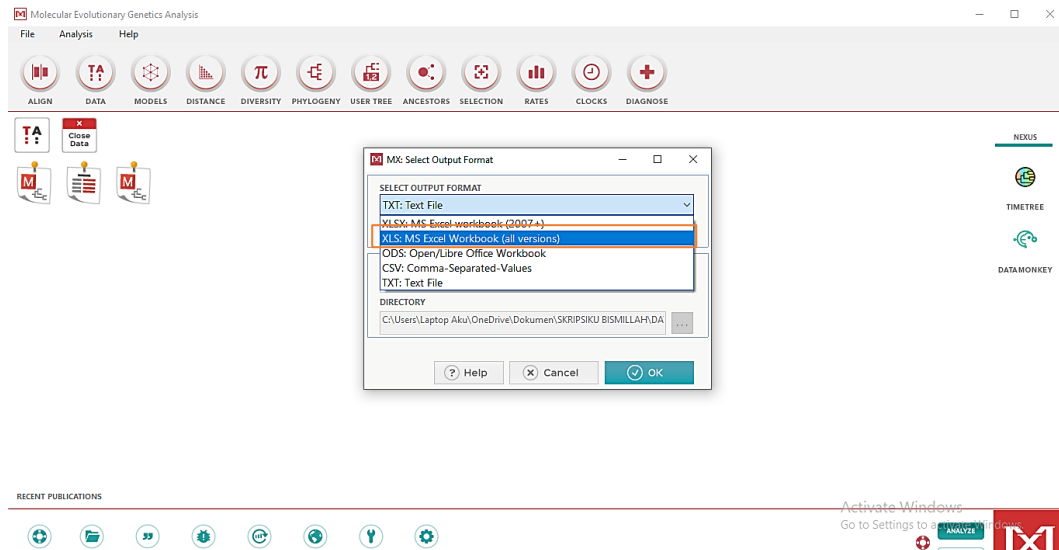
Keterangan: Hasil pohon filogenetika.



RECENT PUBLICATIONS

Activate Windows
Go to Settings to activate Windows.

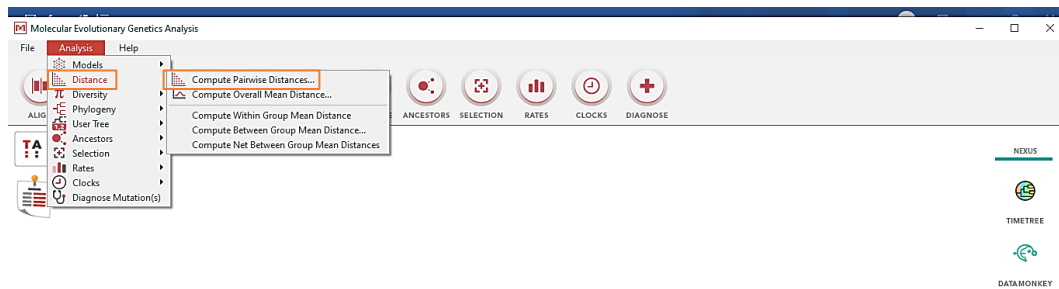
Keterangan : minimize hasil filogenetik, memilih menu Analysis lalu models kemudian memilih Compute Nucleotida composition.



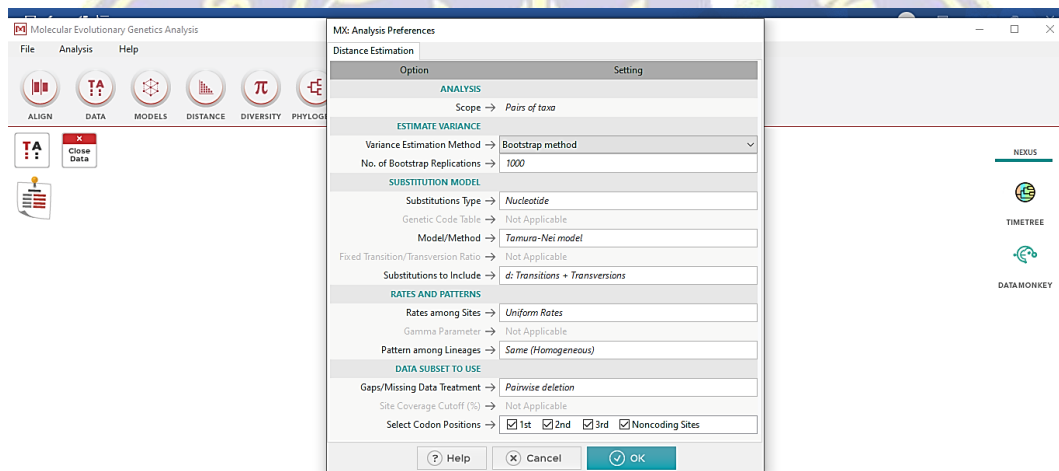
Keterangan: Memilih formas XLS lalu OK.

	A	C	G	T	Total
1 Domain: Data					
2					
3 Betta brownorum Borneo	32.28	27.72	23.66	16.34	1010
4 Betta brownorum 2	32.87	27.03	24.16	15.94	1010
5 Betta brownorum 3	32.77	27.13	24.16	15.94	1010
6 Betta brownorum 4	31.78	28.12	23.86	16.24	1010
7 Betta brownorum 5	31.88	27.82	23.96	16.34	1010
8 Betta brownorum 6	31.98	27.72	23.96	16.34	1010
9 Betta brownorum 7	31.68	28.22	23.86	16.24	1010
10 Betta brownorum 8	31.88	28.12	23.66	16.34	1010
11 Betta brownorum 9	31.88	27.82	23.96	16.34	1010
12 Betta rutilans - 1	32.38	27.52	24.16	15.94	1010
13 Betta rutilans - 2	32.28	27.52	24.16	16.04	1010
14 Betta rutilans - 3	32.38	27.52	24.16	15.94	1010
15 Betta rutilans - 4	32.38	27.52	24.16	15.94	1010
16 Betta rutilans - 5	32.38	27.52	24.16	15.94	1010
17 Betta rutilans - 6	32.38	27.52	24.16	15.94	1010
18 Betta rutilans - 7	32.38	27.52	24.06	16.04	1010
19 Betta rutilans - 8	32.38	27.52	24.26	15.84	1010
20 Betta uberis Kalimantan	32.97	27.23	24.85	14.95	1010
21 Betta burdigala Pulau Bangka	32.67	27.13	25.05	15.15	1010
22 Betta livida Malaysia	31.29	28.61	24.65	15.45	1010
23 Betta idesii Kalimantan Selatan	33.47	25.64	27.82	13.07	1010

Keterangan: Hasil komposisi nukleotida



Keterangan: Minimize hasil komposisi nukleotida, memilih menu Analysis lalu Distance kemudian Compute Pairwise Distances.



Keterangan: Mengisi format Distance Estimation sesuai dengan gambar di atas lalu OK.

MX: Pairwise Distances (PERCOBAAN REVISI.meg)

File Display Average Caption Help

	1	2	3	4	5	6	7	8	9	10
1. Betta brownorum Borneo		0.0065958760	0.0066962031	0.0069173077	0.0085340261	0.0086622506	0.0070315686	0.0074408448	0.0085340261	0.0044356572
2. Betta brownorum 2	0.0412544100		0.0009723318	0.0059436785	0.0088118891	0.0089056173	0.0060761050	0.0065552416	0.0088118891	0.0062897820
3. Betta brownorum 3	0.0423291753	0.0009917544		0.0060606038	0.0089080967	0.0090028024	0.0061861560	0.0066730689	0.0089080967	0.0063900750
4. Betta brownorum 4	0.0466577016	0.0348878137	0.0359464098		0.0094305082	0.0095382217	0.0009881475	0.0029085064	0.0094305082	0.0071132773
5. Betta brownorum 5	0.0640113679	0.0674347522	0.0685634353	0.0754271067		0.0009571758	0.0095325889	0.0097927334	0.0000000000	0.0086758433
6. Betta brownorum 6	0.0651250106	0.0685648527	0.0696978329	0.0765653334	0.0009917526		0.0096438352	0.0098955724	0.0009571758	0.0087740241
7. Betta brownorum 7	0.0477439495	0.0359464098	0.0370087499	0.0009917450	0.0765640968	0.0777066701		0.0027381316	0.0095325889	0.0072228544
8. Betta brownorum 8	0.0520754862	0.0391645224	0.0400240006	0.0079781725	0.0788491969	0.079883897	0.0069756067		0.0097927334	0.0077749066
9. Betta brownorum 9	0.0640113679	0.0674347522	0.0685634353	0.0754271067	0.0000000000	0.0009917526	0.0765640968	0.0788491969		0.0086758433
10. Betta rutilans - 1	0.0171239936	0.0381373828	0.0391960781	0.0489248026	0.0642265729	0.0653269222	0.0500101789	0.0555071973	0.0642265729	
11. Betta rutilans - 2	0.0160739148	0.0359387345	0.0369946711	0.0477566501	0.0629809961	0.0640824445	0.0488430899	0.0532133790	0.0629809961	0.0029837970
12. Betta rutilans - 3	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
13. Betta rutilans - 4	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
14. Betta rutilans - 5	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
15. Betta rutilans - 6	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
16. Betta rutilans - 7	0.0160927550	0.0370482359	0.0381069313	0.0456226907	0.0630688699	0.0641692193	0.0467080670	0.0521425626	0.0630688699	0.0029347888
17. Betta rutilans - 8	0.0201660486	0.0402035616	0.0412641313	0.0521101485	0.0653288523	0.0664333160	0.0531927538	0.0576133648	0.0653288523	0.0069885329
18. Betta uberis Kalimantan	0.1343696094	0.1369402627	0.1382470292	0.1459096818	0.1458211659	0.1471766901	0.1472389568	0.1508915379	0.1458211659	0.130649247
19. Betta burdigala Pulau Bangka	0.1814533635	0.1761581142	0.1775214553	0.1760540321	0.1917604141	0.1931726808	0.1746856598	0.1787011928	0.1917604141	0.1774786138
20. Betta lalida Malaysia	0.2436994248	0.2347135044	0.2362991543	0.2453828854	0.2667301145	0.2650363048	0.2470101970	0.2525347830	0.2667301145	0.2346557300
21. Betta compuncta Kalimantan Timur	0.2280333451	0.2318042584	0.2334061195	0.2306726348	0.2573642229	0.2557163809	0.2322412595	0.2391802058	0.2573642229	0.2241251286
22. Betta midas Kalimantan Barat	0.2179301101	0.2163656883	0.2178217972	0.2248826765	0.2470054448	0.2485688788	0.2263524903	0.2320277517	0.2470054448	0.2134401588
23. Betta ocellata Kalimantan Timur	0.2519866115	0.2519455166	0.2536234794	0.2484781213	0.2661431431	0.2644442088	0.2501375250	0.2572220510	0.2661431431	0.2499092469
24. Betta coccinea Sumatra	0.1785191609	0.1759112835	0.1773062173	0.1716895736	0.1929957327	0.1944403140	0.1730492275	0.1770044334	0.1929957327	0.1800538389
25. Betta akarensis Borneo	0.2294403539	0.2192897749	0.2208191918	0.2264862716	0.2563985044	0.2547559101	0.2280389486	0.2335765471	0.2563985044	0.2258086341
26. Betta enisae Kalimantan Barat	0.2237535655	0.2269179491	0.2284589628	0.2265687483	0.2464256803	0.2479750607	0.2280947359	0.2352793775	0.2464256803	0.2221822048
28. Betta foerschii Borneo	0.2355211873	0.2478533281	0.2461937753	0.2275254308	0.2499373942	0.2515906506	0.2290896420	0.2331054262	0.2499373942	0.2374027493

Go to Settings to activate Windows.

[1,1] (Betta brownorum | Borneo-Betta brownorum | Borneo) / Nucleotide: Tamura-Nei

Keterangan: Hasil jarak genetik.

MX: Pairwise Distances (PERCOBAAN REVISI.meg)

File Display Average Caption Help

	1	2	3	4	5	6	7	8	9	10
1. Betta brownorum Borneo		0.0065958760	0.0066962031	0.0069173077	0.0085340261	0.0086622506	0.0070315686	0.0074408448	0.0085340261	0.0044356572
2. Betta brownorum 2	0.0412544100		0.0009723318	0.0059436785	0.0088118891	0.0089056173	0.0060761050	0.0065552416	0.0088118891	0.0062897820
3. Betta brownorum 3	0.0423291753	0.0009917544		0.0060606038	0.0089080967	0.0090028024	0.0061861560	0.0066730689	0.0089080967	0.0063900750
4. Betta brownorum 4	0.0466577016	0.0348878137	0.0359464098		0.0094305082	0.0095382217	0.0009881475	0.0029085064	0.0094305082	0.0071132773
5. Betta brownorum 5	0.0640113679	0.0674347522	0.0685634353	0.0754271067		0.0009571758	0.0095325889	0.0097927334	0.0000000000	0.0086758433
6. Betta brownorum 6	0.0651250106	0.0685648527	0.0696978329	0.0765653334	0.0009917526		0.0096438352	0.0098955724	0.0009571758	0.0087740241
7. Betta brownorum 7	0.0477439495	0.0359464098	0.0370087499	0.0009917450	0.0765640968	0.0777066701		0.0027381316	0.0095325889	0.0072228544
8. Betta brownorum 8	0.0520754862	0.0391645224	0.0400240006	0.0079781725	0.0788491969	0.079883897	0.0069756067		0.0097927334	0.0077749066
9. Betta brownorum 9	0.0640113679	0.0674347522	0.0685634353	0.0754271067	0.0000000000	0.0009917526	0.0765640968	0.0788491969		0.0086758433
10. Betta rutilans - 1	0.0171239936	0.0381373828	0.0391960781	0.0489248026	0.0642265729	0.0653269222	0.0500101789	0.0555071973	0.0642265729	
11. Betta rutilans - 2	0.0160739148	0.0359387345	0.0369946711	0.0477566501	0.0629809961	0.0640824445	0.0488430899	0.0532133790	0.0629809961	0.0029837970
12. Betta rutilans - 3	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
13. Betta rutilans - 4	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
14. Betta rutilans - 5	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
15. Betta rutilans - 6	0.0150672639	0.0359669678	0.0370256632	0.0467177520	0.0619222703	0.0630226197	0.0478031283	0.0532584613	0.0619222703	0.0019904762
16. Betta rutilans - 7	0.0160927550	0.0370482359	0.0381069313	0.0456226907	0.0630688699	0.0641692193	0.0467080670	0.0521425626	0.0630688699	0.0029347888
17. Betta rutilans - 8	0.0201660486	0.0402035616	0.0412641313	0.0521101485	0.0653288523	0.0664333160	0.0531927538	0.0576133648	0.0653288523	0.0069885329
18. Betta uberis Kalimantan	0.1343696094	0.1369402627	0.1382470292	0.1459096818	0.1458211659	0.1471766901	0.1472389568	0.1508915379	0.1458211659	0.130649247
19. Betta burdigala Pulau Bangka	0.1814533635	0.1761581142	0.1775214553	0.1760540321	0.1917604141	0.1931726808	0.1746856598	0.1787011928	0.1917604141	0.1774786138
20. Betta lalida Malaysia	0.2436994248	0.2347135044	0.2362991543	0.2453828854	0.2667301145	0.2650363048	0.2470101970	0.2525347830	0.2667301145	0.2346557300
21. Betta compuncta Kalimantan Timur	0.2280333451	0.2318042584	0.2334061195	0.2306726348	0.2573642229	0.2557163809	0.2322412595	0.2391802058	0.2573642229	0.2241251286
22. Betta midas Kalimantan Barat	0.2179301101	0.2163656883	0.2178217972	0.2248826765	0.2470054448	0.2485688788	0.2263524903	0.2320277517	0.2470054448	0.2134401588
23. Betta ocellata Kalimantan Timur	0.2519866115	0.2519455166	0.2536234794	0.2484781213	0.2661431431	0.2644442088	0.2501375250	0.2572220510	0.2661431431	0.2499092469
24. Betta coccinea Sumatra	0.1785191609	0.1759112835	0.1773062173	0.1716895736	0.1929957327	0.1944403140	0.1730492275	0.1770044334	0.1929957327	0.1800538389
25. Betta akarensis Borneo	0.2294403539	0.2192897749	0.2208191918	0.2264862716	0.2563985044	0.2547559101	0.2280389486	0.2335765471	0.2563985044	0.2258086341
26. Betta enisae Kalimantan Barat	0.2237535655	0.2269179491	0.2284589628	0.2265687483	0.2464256803	0.2479750607	0.2280947359	0.2352793775	0.2464256803	0.2221822048
28. Betta foerschii Borneo	0.2355211873	0.2478533281	0.2461937753	0.2275254308	0.2499373942	0.2515906506	0.2290896420	0.2331054262	0.2499373942	0.2374027493

Go to Settings to activate Windows.

[1,1] (Betta brownorum | Borneo-Betta brownorum | Borneo) / Nucleotide: Tamura-Nei

Keterangan: Memilih icon Excel untuk menyimpan hasil jarak genetik

Distance Data Export Options

Output Format: Excel Workbook (.xls... ▼)

Information To Write

☒ Distances

☐ Distances and Std Err

Decimal Places: 2

Export Type: Matrix ▼

Matrix: Lower Left ▼

? Help ✕ Cancel ✓ OK

Done Loading

Keterangan: Mengatur Distance Data Export Options seperti gambar di atas.

