

BV-BRC Test Report

A4. Service – Genome Annotation - Viruses

Item to test	Genome Annotation Service using bacterial contig files
URL	https://www.bv-brc.org/app/Annotation
Prerequisites	Viral Fasta contig files in Workspace
References	https://www.bv-brc.org/docs/quick_references/services/genome_annotation_service.html https://www.bv-brc.org/docs/tutorial/genome_annotation/genome_annotation.html
Tester(s)	Maulik Shukla
Test date	21-Apr-2022 (follow-up from original test)
Test result	Passed

Overview

- Test the Genome Annotation Service using exemplar genome sequences for viral genomes.
- Test input options, i.e., contig file from the user's machine or from the user's workspace.
- For each job submitted, verify successful completion of the job, availability of the output files in the workspace, and quality of the annotations by comparing them with the same, or closely related, public genome in BV-BRC and ViPR.
- Verify successful integration of the genome in BV-BRC by reviewing the genome overview pages and other genome-level tabs.

Test Data

Genome Name	Rational	Input File
Influenza A virus A/Puerto Rico/8/1934	Reference genome	Influenza_A_virus.fna
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1	Reference genome	SARSCoV2_Wuhan-Hu-1.fasta
Zika virus MR 766	Reference genome	Zika_virus_MR766.fasta

- All test datasets and corresponding job results are available in the following public workspace:
<https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses>

Test Results

- All annotation jobs completed successfully, without any errors.
- All jobs resulted in expected output files in corresponding job output directory, providing annotations in various standard file formats.
- All genomes were indexed successfully in the Solr database and were accessible from the BV-BRC website.

- For each of the genomes, the genome overview page, genome browser, and all other genome level tabs loaded successfully as expected.
- For each of the genomes, annotation of genomic features, protein functions, specialty genes was as expected when compared to those in corresponding public genomes in BV-BRC and VIPR.
- Below are a series of screenshots showing successful completion of the jobs, availability of the result files in the workspace, and comparison of the annotation between test genome and corresponding public genome.
- All test datasets and corresponding job results are available in the following public workspace:
<https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses>

Status	ID	Service	Output Name	Submit	Start	Completed
completed	7419859	Annotation	Influenza A virus A Puerto Rico 8 1934	4/20/22, 4:03 PM	4/20/22, 4:03 PM	4/20/22, 4:06 PM
completed	7419860	Annotation	Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1	4/20/22, 4:04 PM	4/20/22, 4:04 PM	4/20/22, 4:09 PM
completed	7419863	Annotation	Zika virus MR 766	4/20/22, 4:05 PM	4/20/22, 4:06 PM	4/20/22, 4:09 PM

- Result verification: Influenza A virus A/Puerto Rico/8/1934
 Job result directory: [https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses/Influenza a%20A%20virus%20A%20Puerto%20Rico%208%201934](https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses/Influenza%20A%20virus%20A%20Puerto%20Rico%208%201934)

Name	Size	Owner	Members	Created
Parent folder				
Influenza A virus A Puerto Rico 8 1934.contigs.fasta	13.9 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.embl	36.8 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.feature_dna.fasta	17.8 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.feature_protein.fasta	6.9 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.features.txt	1.7 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.gb	35.6 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.genome	44.1 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.gff	1.6 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.merged.gb	32.4 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.tar.gz	9.8 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.txt	23.2 kB	me	Public	4/20/22, 4:04 PM
Influenza A virus A Puerto Rico 8 1934.xls	29.2 kB	me	Public	4/20/22, 4:04 PM
load_files		me	Public	4/20/22, 4:04 PM
quality.json	736 B	me	Public	4/20/22, 4:06 PM
vigor4.stderr.txt	0 B	me	Public	4/20/22, 4:04 PM
vigor4.stdout.txt	11.6 kB	me	Public	4/20/22, 4:04 PM

- Annotation comparison with the public reference genome segments in BV-BRC:
[https://www.bv-brc.org/view/GenomeList/?eq\(*,*\)&genome\(in\(genome_id,\(211044.131,211044.130,211044.129,211044.135,211044.133,211044.132,211044.128,211044.134\)\)\)#view_tab=features&filter=eq\(annotation,%22PATRIC%22\)](https://www.bv-brc.org/view/GenomeList/?eq(*,*)&genome(in(genome_id,(211044.131,211044.130,211044.129,211044.135,211044.133,211044.132,211044.128,211044.134)))#view_tab=features&filter=eq(annotation,%22PATRIC%22))

Genome Name	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	mat_peptide	fig 11320.282100.mat		57	1064	+	1008	HA	HA1
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	mat_peptide	fig 11320.282100.mat		1065	1730	+	666	HA	HA2
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		25	784	+	759	PA-X	PA-X protein
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		119	382	+	264	PB1-F2	PB1-F2 protein
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		33	1733	+	1701	HA	hemagglutinin
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		26	784	+	759	M1	matrix protein 1
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		26	1007	+	294	M2	matrix protein 2
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		21	1385	+	1365	NA	neuraminidase
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		27	719	+	693	NS1	nonstructural protein 1
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		27	864	+	366	NEP	nuclear export protein
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		46	1542	+	1497	NP	nucleocapsid protein
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		25	2175	+	2151	PA	polymerase PA
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		25	2298	+	2274	PB1	polymerase PB1
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	CDS	fig 11320.282100.CD		28	2307	+	2280	PB2	polymerase PB2
Influenza A virus A Puerto Rico 8 1934	11320.282100.con.0C	mat_peptide	fig 11320.282100.mat		33	56	+	24	HA	signal peptide

Genome ID	Genome Name	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
211044.133	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002017		mat_peptide	fig 211044.133.mat_FLUAVs4gp1		57	1064	+	1008	HA	HA1
211044.133	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002017		mat_peptide	fig 211044.133.mat_FLUAVs4gp1		1065	1730	+	666	HA	HA2
211044.135	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002022		CDS	fig 211044.135.CDS_FLUAVs3gp2		25	784	+	759	PA-X	PA-X protein
211044.134	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002021		CDS	fig 211044.134.CDS_FLUAVs2gp2		119	382	+	264	PB1-F2	PB1-F2 protein
211044.133	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002017		CDS	fig 211044.133.CDS_FLUAVs4gp1		33	1733	+	1701	HA	hemagglutinin
211044.128	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002016		CDS	fig 211044.128.CDS_FLUAVs7gp1		26	784	+	759	M1	matrix protein 1
211044.128	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002016		CDS	fig 211044.128.CDS_FLUAVs7gp2		26	1007	+	294	M2	matrix protein 2
211044.130	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002018		CDS	fig 211044.130.CDS_FLUAVs6gp1		21	1385	+	1365	NA	neuraminidase
211044.131	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002020		CDS	fig 211044.131.CDS_FLUAVs8gp2		27	719	+	693	NS1	nonstructural protein 1
211044.131	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002020		CDS	fig 211044.131.CDS_FLUAVs8gp1		27	864	+	366	NS2	nuclear export protein
211044.129	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002019		CDS	fig 211044.129.CDS_FLUAVs5gp1		46	1542	+	1497	NP	nucleocapsid protein
211044.135	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002022		CDS	fig 211044.135.CDS_FLUAVs3gp1		25	2175	+	2151	PA	polymerase PA
211044.134	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002021		CDS	fig 211044.134.CDS_FLUAVs2gp1		25	2298	+	2274	PB1	polymerase PB1
211044.132	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002023		CDS	fig 211044.132.CDS_FLUAVs1gp1		28	2307	+	2280	PB2	polymerase PB2
211044.133	Influenza A virus (A/Puerto Rico/8/1934)(t NC_002017		mat_peptide	fig 211044.133.mat		33	56	+	24	HA	signal peptide

- Result verification: Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1

Job result directory: [https://www.bv-](https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses/Severe%20acute%20respiratory%20syndrome%20coronavirus%202%20Wuhan-Hu-1)

[brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses/Severe%20acute%20respiratory%20syndrome%20coronavirus%202%20Wuhan-Hu-1](https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses/Severe%20acute%20respiratory%20syndrome%20coronavirus%202%20Wuhan-Hu-1)

Name	Size	Owner	Members	Created
Parent folder				
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.contigs.fasta	30.4 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.embl	81.1 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.feature_dna.fasta	70.5 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.feature_protein.fasta	26.5 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.features.txt	4.4 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.gb	78.8 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.genome	102.8 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.gff	3.7 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.merged.gb	78.7 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.tar.gz	21.1 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.txt	90.9 kB	me	Public	4/20/22, 4:07 PM
Severe acute respiratory syndrome coronavirus 2 Wuhan-Hu-1.xls	99.8 kB	me	Public	4/20/22, 4:07 PM
load_files		me	Public	4/20/22, 4:07 PM
quality.json	740 B	me	Public	4/20/22, 4:09 PM
vigor4.stderr.txt	0 B	me	Public	4/20/22, 4:07 PM
vigor4.stdout.txt	11.6 kB	me	Public	4/20/22, 4:07 PM

Annotation comparison with the public reference genome in PATRIC:

<https://www.bv-brc.org/view/Genome/2697049.107626>

<input type="checkbox"/>	Genome Name	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		266	805	+	540	ORF1ab	leader protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		266	21555	+	21291	ORF1ab	ORF1ab polyprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		266	13483	+	13218	ORF1a	ORF1a polyprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		806	2719	+	1914	ORF1ab	nsp2
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		2720	8554	+	5835	ORF1ab	nsp3
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		8555	10054	+	1500	ORF1ab	nsp4
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		10055	10972	+	918	ORF1ab	3C-like proteinase
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		10973	11842	+	870	ORF1ab	nsp6
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		11843	12091	+	249	ORF1ab	nsp7
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		12092	12685	+	594	ORF1ab	nsp8
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		12686	13024	+	339	ORF1ab	nsp9
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		13025	13441	+	417	ORF1ab	nsp10
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		13442	16237	+	2796	ORF1ab	RNA-dependent RNA polymerase
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		13442	13480	+	39	ORF1a	nsp11
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		16238	18040	+	1803	ORF1ab	helicase
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		18041	19621	+	1581	ORF1ab	3'-to-5' exonuclease
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		19622	20659	+	1038	ORF1ab	endorNAse
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	mat_peptide	fig 2697049.4848024		20660	21553	+	894	ORF1ab	2'-O-ribose methyltransferase
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		21563	25384	+	3822	S	surface glycoprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		21744	21863	+	120	ORF2b	ORF2b protein - expression ambiguous
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		25393	26220	+	828	ORF3a	ORF3a protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		25457	25582	+	126	ORF3c	ORF3c protein - expression ambiguous
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		25524	25697	+	174	ORF3d	ORF3d protein - expression ambiguous
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		25596	25697	+	102	ORF3d/-2	ORF3d/-2 protein - expression ambiguous
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		25814	25882	+	69	ORF3b	ORF3b protein - expression ambiguous
<input type="checkbox"/>	Severe acute respiratory syndrome coronavirus	2697049.4848024.co	CDS	fig 2697049.4848024		26221	26477	+	256	E	envelope protein

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<input type="checkbox"/>	Genome Name	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp01		266	21555	+	21291	ORF1ab	ORF1ab polyprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp01		266	13483	+	13218	ORF1ab	ORF1a polyprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		266	805	+	540	ORF1ab	leader protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		806	2719	+	1914	ORF1ab	nsp2
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		2720	8554	+	5835	ORF1ab	nsp3
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		8555	10054	+	1500	ORF1ab	nsp4
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		10055	10972	+	918	ORF1ab	3C-like proteinase
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		10973	11842	+	870	ORF1ab	nsp6
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		11843	12091	+	249	ORF1ab	nsp7
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		12092	12685	+	594	ORF1ab	nsp8
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		12686	13024	+	339	ORF1ab	nsp9
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		13025	13441	+	417	ORF1ab	nsp10
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r		13442	16237	+	2796	ORF1ab	RNA-dependent RNA polymerase
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r.GU280_gp01		13442	13480	+	39	ORF1ab	nsp11
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r		16238	18040	+	1803	ORF1ab	helicase
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r		18041	19621	+	1581	ORF1ab	3'-to-5' exonuclease
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r		19622	20659	+	1038	ORF1ab	endoRNase
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		mat_peptide	fig 2697049.107626.r		20660	21553	+	894	ORF1ab	2'-O-ribose methyltransferase
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp02		21563	25384	+	3822	spike glycoprotein	surface glycoprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp03		25393	26220	+	828	ORF3a	ORF3a protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp04		26245	26472	+	228	E	envelope protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp05		26523	27191	+	669	M	membrane glycoprotein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp06		27202	27387	+	186	ORF6	ORF6 protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp07		27394	27759	+	366	ORF7a	ORF7a protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp08		27756	27887	+	132	ORF7b	ORF7b protein
<input type="checkbox"/>	Severe acute respiratory syndrome coronav NC_045512		CDS	fig 2697049.107626.1.GU280_gp09		27888	28150	+	262	ORF8	ORF8 protein

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- Result verification: Zika virus MR 766

Job result directory: <https://www.bv-brc.org/workspace/BVBRC@patricbrc.org/BVBRC%20Tests/Genome%20Annotation/Viruses/Zika%20virus%20MR%20766>

Name	Size	Owner	Members	Created
Parent folder				
Zika virus MR 766.contigs.fasta	11.0 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.embl	28.0 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.feature_dna.fasta	21.5 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.feature_protein.fasta	7.9 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.features.txt	1.6 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.gb	27.1 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.genome	37.3 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.gff	1.3 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.merged.gb	27.1 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.tar.gz	7.8 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.txt	28.5 kB	me	Public	4/20/22, 4:08 PM
Zika virus MR 766.xls	33.8 kB	me	Public	4/20/22, 4:08 PM
load_files		me	Public	4/20/22, 4:08 PM
quality.json	739 B	me	Public	4/20/22, 4:09 PM
vigor4.stderr.txt	0 B	me	Public	4/20/22, 4:08 PM
vigor4.stdout.txt	7.4 kB	me	Public	4/20/22, 4:08 PM

Annotation comparison with the public reference genome in BV- BRC:

<https://www.bv-brc.org/view/Genome/186538.2733>

<input type="checkbox"/>	Genome Name	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	CDS	figl64320.2235.CDS.1	ZIKV_gp1	107	10366	+	10260	GP1	genome polyprotein
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_1	ZIKV_gp1	473	751	+	279	GP1	protein pr
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_2	ZIKV_gp1	752	976	+	225	GP1	small envelope protein M
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_3	ZIKV_gp1	977	2476	+	1500	GP1	envelope protein E
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_4	ZIKV_gp1	2477	3532	+	1056	GP1	nonstructural protein NS1
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_5	ZIKV_gp1	3533	4210	+	678	GP1	nonstructural protein NS2A
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_6	ZIKV_gp1	4211	4600	+	390	GP1	nonstructural protein NS2B
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_7	ZIKV_gp1	4601	6451	+	1851	GP1	nonstructural protein NS3
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_8	ZIKV_gp1	6452	6832	+	381	GP1	nonstructural protein NS4A
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_9	ZIKV_gp1	6833	6901	+	69	GP1	protein 2K
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_10	ZIKV_gp1	6902	7654	+	753	GP1	nonstructural protein NS4B
<input type="checkbox"/>	Zika virus MR 766	64320.2235.con.0001	mat_peptide	figl64320.2235.mat_11	ZIKV_gp1	7655	10363	+	2709	GP1	RNA-dependent RNA polymerase NS5

<input type="checkbox"/>	Genome Name	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
<input type="checkbox"/>	Zika virus MR 766	NC_012532	CDS	figl64320.46.CDS.1	ZIKV_gp1	107	10366	+	10260	POLY	genome polyprotein
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_1	ZIKV_gp1	473	751	+	279	POLY	protein pr
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_2	ZIKV_gp1	752	976	+	225	POLY	small envelope protein M
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_3	ZIKV_gp1	977	2476	+	1500	POLY	envelope protein E
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_4	ZIKV_gp1	2477	3532	+	1056	POLY	nonstructural protein NS1
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_5	ZIKV_gp1	3533	4210	+	678	POLY	nonstructural protein NS2A
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_6	ZIKV_gp1	4211	4600	+	390	POLY	nonstructural protein NS2B
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_7	ZIKV_gp1	4601	6451	+	1851	POLY	nonstructural protein NS3
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_8	ZIKV_gp1	6452	6832	+	381	POLY	nonstructural protein NS4A
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_9	ZIKV_gp1	6833	6901	+	69	POLY	protein 2K
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_10	ZIKV_gp1	6902	7654	+	753	POLY	nonstructural protein NS4B
<input type="checkbox"/>	Zika virus MR 766	NC_012532	mat_peptide	figl64320.46.mat_pej_11	ZIKV_gp1	7655	10363	+	2709	POLY	RNA-dependent RNA polymerase NS5

References

- [Genome Annotation Protocol](#)
- [RASTtk: A modular and extensible implementation of the RAST algorithm for building custom annotation pipelines and annotating batches of genomes](#)
- [Genome Annotation Service](#)
- [Genome Annotation Service Quick Reference Guide](#)
- [Genome Annotation Service Tutorial](#)