BV-BRC Test Report

S5. Proteins Search

Item to test	Proteins Search
URL	https://www.bv-brc.org/searches/GenomicFeatureSearch
Prerequisites	None
References	https://www.bv-brc.org/docs/quick_references/searches_menu.html https://www.bv-brc.org/docs/quick_references/organisms_taxon/proteins.html
Tester(s)	Rebecca Wattam, Christian Zmasek, Ron Kenyon
Test date	04-Feb-2022 and 10-Feb-2022 (original - passed), 21-Apr-2022 (follow-up - passed)
Test Result	Passed

Overview

- Test the Proteins Search using representative search criteria for bacterial and viral data.
- Test using example Keywords.
- Test using BRC ID, Product Name, and Taxon Name.
- Inspect search results to verify that they match search criteria.
- For viral data, test using representative criteria and verify that returned protein counts are comparable with IRD/ViPR.

Test Results

- Test results were verified by examination of returned data via inspection, filters, and/or comparison with the same search in the legacy PATRIC and IRD/ViPR resources (if present in those resources).
- All searches returned expected data, with results matching search criteria.
- Search results were comparable between BV-BRC and ViPR for the proteins search (PATRIC does not have this specialized search tool).

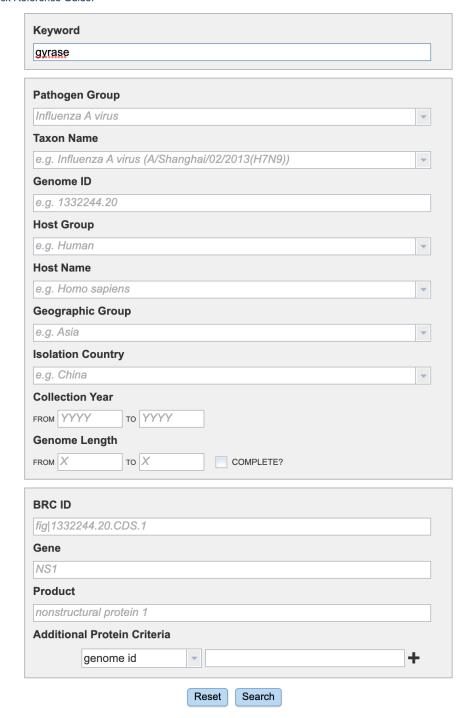
Keyword and Other Search Critieria

Keyword: gyrase

Advanced Search

Protein Search

Search for proteins of interest (resulting from CDS and mature peptide features) using generic keywords, pathogen group, various genome metadata attributes, protein product, or database identifiers. For further explanation, please see the Advanced Search Quick Reference Guide.



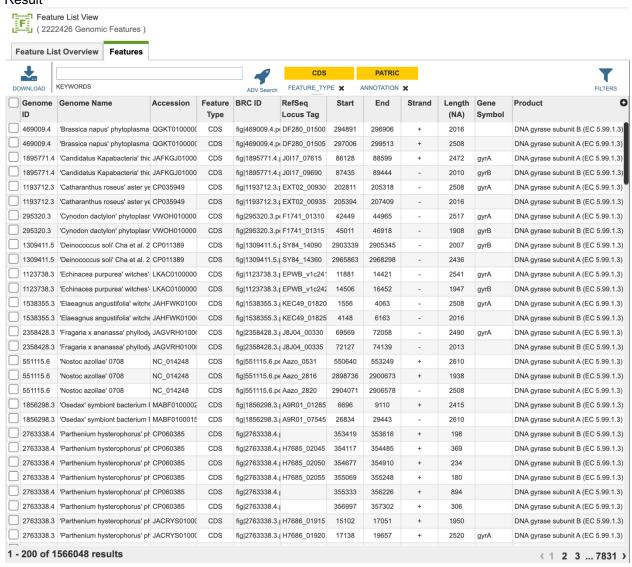
Result:

Feature List View (2222426 Genomic Features)

*						CDS		PATRIC				T
DOWNLOAD	KEYWORDS				ADV Search	FEATURE_TY	PE X	ANNOTATION	×			FILTERS
Genome	Genome Name	е	Accession	Feature Type	BRC ID	RefSeq Locus Tag	Start	End	Strand	Length (NA)	Gene Symbol	Product
469009.4	'Brassica napus'	phytoplasma	QGKT0100000	CDS	fig 469009.4.p	DF280_01500	294891	296906	+	2016		DNA gyrase subunit B (EC 5.99.1.3
469009.4	'Brassica napus'	phytoplasma	QGKT0100000	CDS	fig 469009.4.p	DF280_01505	297006	299513	+	2508		DNA gyrase subunit A (EC 5.99.1.3
1895771.	1 'Candidatus Kap	abacteria' thic	JAFKGJ01000	CDS	fig 1895771.4.	J0I17_07615	86128	88599	+	2472	gyrA	DNA gyrase subunit A (EC 5.99.1.3
1895771.	1 'Candidatus Kap	abacteria' thic	JAFKGJ01000	CDS	fig 1895771.4.	J0117_09690	87435	89444	-	2010	gyrB	DNA gyrase subunit B (EC 5.99.1.
1193712.3	'Catharanthus ro	seus' aster ye	CP035949	CDS	fig 1193712.3.	EXT02_00930	202811	205318	-	2508	gyrA	DNA gyrase subunit A (EC 5.99.1.3
1193712.3	'Catharanthus ro	seus' aster ye	CP035949	CDS	fig 1193712.3.	EXT02_00935	205394	207409	-	2016		DNA gyrase subunit B (EC 5.99.1.
295320.3	'Cynodon dactyle	on' phytoplasr	VWOH010000	CDS	fig 295320.3.p	F1741_01310	42449	44965	-	2517	gyrA	DNA gyrase subunit A (EC 5.99.1.3
295320.3	'Cynodon dactyle	on' phytoplasr	VWOH010000	CDS	fig 295320.3.p	F1741_01315	45011	46918	-	1908	gyrB	DNA gyrase subunit B (EC 5.99.1.
1309411.	'Deinococcus so	li' Cha et al. 2	CP011389	CDS	fig 1309411.5.	SY84_14090	2903339	2905345	-	2007	gyrB	DNA gyrase subunit B (EC 5.99.1.
1309411.	'Deinococcus so	li' Cha et al. 2	CP011389	CDS	fig 1309411.5.	SY84_14360	2965863	2968298	-	2436		DNA gyrase subunit A (EC 5.99.1.
1123738.	'Echinacea purp	urea' witches'-	LKAC0100000	CDS	fig 1123738.3.	EPWB_v1c241	11881	14421	-	2541	gyrA	DNA gyrase subunit A (EC 5.99.1.
1123738.3	'Echinacea purp	urea' witches'-	LKAC0100000	CDS	fig 1123738.3.	EPWB_v1c242	14506	16452	-	1947	gyrB	DNA gyrase subunit B (EC 5.99.1
1538355.	'Elaeagnus angu	ustifolia' witche	JAHFWK0100	CDS	fig 1538355.3.	KEC49_01820	1556	4063	-	2508	gyrA	DNA gyrase subunit A (EC 5.99.1.
1538355.	3 'Elaeagnus angu	ustifolia' witche	JAHFWK0100	CDS	fig 1538355.3.	KEC49_01825	4148	6163	-	2016		DNA gyrase subunit B (EC 5.99.1
2358428.	3 'Fragaria x anan	assa' phyllody	JAGVRH01000	CDS	fig 2358428.3.	J8J04_00330	69569	72058	-	2490	gyrA	DNA gyrase subunit A (EC 5.99.1.
2358428.	'Fragaria x anan	assa' phyllody	JAGVRH01000	CDS	fig 2358428.3.	J8J04_00335	72127	74139	-	2013		DNA gyrase subunit B (EC 5.99.1
551115.6	'Nostoc azollae'	0708	NC_014248	CDS	fig 551115.6.pe	Aazo_0531	550640	553249	+	2610		DNA gyrase subunit A (EC 5.99.1.
551115.6	'Nostoc azollae'	0708	NC_014248	CDS	fig 551115.6.pe	Aazo_2816	2898736	2900673	+	1938		DNA gyrase subunit B (EC 5.99.1
551115.6	'Nostoc azollae'	0708	NC_014248	CDS	fig 551115.6.pe	Aazo_2820	2904071	2906578	-	2508		DNA gyrase subunit A (EC 5.99.1.
1856298.	'Osedax' symbio	nt bacterium f	MABF0100002	CDS	fig 1856298.3.	A9R01_01285	6696	9110	+	2415		DNA gyrase subunit B (EC 5.99.1
1856298.	'Osedax' symbio	nt bacterium f	MABF0100015	CDS	fig 1856298.3.	A9R01_07545	26834	29443	-	2610		DNA gyrase subunit A (EC 5.99.1.
2763338.	Parthenium hys	terophorus' ph	CP060385	CDS	fig 2763338.4.		353419	353616	+	198		DNA gyrase subunit B (EC 5.99.1
2763338.	Parthenium hys	terophorus' ph	CP060385	CDS	fig 2763338.4.	H7685_02045	354117	354485	+	369		DNA gyrase subunit B (EC 5.99.1
2763338.	1 'Parthenium hys	terophorus' ph	CP060385	CDS	fig 2763338.4.	H7685_02050	354677	354910	+	234		DNA gyrase subunit B (EC 5.99.1
2763338.				CDS		H7685_02055	355069	355248	+	180		DNA gyrase subunit B (EC 5.99.1
2763338.				CDS	fig 2763338.4.		355333	356226	+	894		DNA gyrase subunit A (EC 5.99.1.
2763338.	Parthenium hys	terophorus' ph	CP060385	CDS	fig 2763338.4.		356997	357302	+	306		DNA gyrase subunit A (EC 5.99.1.
2763338.	3 'Parthenium hys			CDS	0.	H7686_01915	15102	17051	+	1950		DNA gyrase subunit B (EC 5.99.1.
_	3 'Parthenium hys			CDS		H7686_01920	17138	19657	+	2520	gyrA	DNA gyrase subunit A (EC 5.99.1.

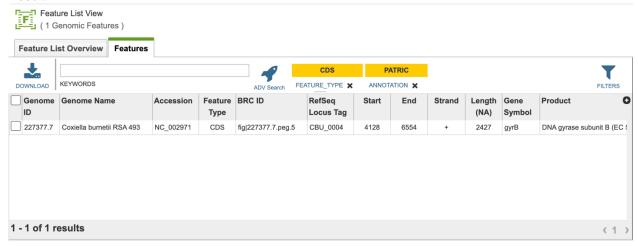
Product Name: gyrase

Result



BRC ID: fig|227377.7.peg.5

Result:



Specialized search comparisons between BV-BRC and ViPR

Verifying proteins count for equivalent proteins searches in BV-BRC and ViPR. differences are attributable to timing of data updates in each database.

Results:

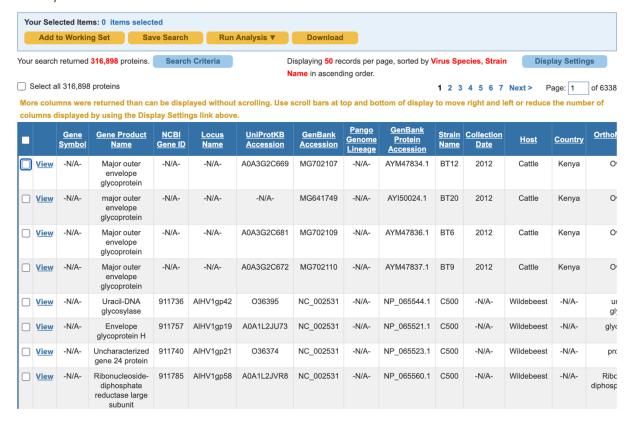
Viral Group	Search Parameters	ViPR	BV-BRC	
Arenaviridae	Taxon Name: Arenaviridae	6,581	6,884	
Herpesviridae	Taxon Name: Herpesviridae	316,898	313,473	
	Taxon Name: Herpesviridae Product name: glycoprotein H	2,793	1,701	

Herpesviridae (example screenshots)

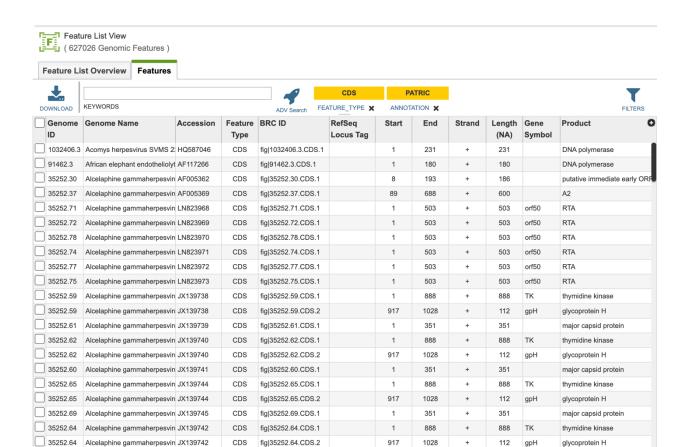
ViPR:

<u>ViPR Home</u> ▶ <u>Herpesviridae Home</u> ▶ <u>Gene/Protein Search</u> ▶ Results

Gene/Protein Search Result



BV-BRC:



351

888

351

888

TK

major capsid protein

(1 2 3 ... 1568 >

thymidine kinase

35252.63 Alcelaphine gammaherpesviri JX139743

35252.68 Alcelaphine gammaherpesviri JX139746

1 - 200 of 313473 results

CDS

CDS

fig|35252.63.CDS.1

figl35252.68.CDS.1