

How To: Identify all the contigs that share a set of genes (e.g., blaTEM-1 and blaKPC-4)

NCBI Pathogen Detection

<https://www.ncbi.nlm.nih.gov/pathogens>



U.S. National Library of Medicine
National Center for Biotechnology Information

How do I identify all the contigs that share a set of genes? (e.g., blaTEM-1 and blaKPC-4)

- Use [MicroBIGG-E](#)
- Use the search term *genes_on_contig*
“*genes_on_contig:blaTEM-1 AND genes_on_contig:blaKPC-4*”
- Download contigs fasta files

Pathogen Detection BETA



To assist the National Database of Antibiotic Resistant Organisms (NDARO), NCBI Pathogen Detection identifies the antimicrobial resistance, stress response, and virulence genes found in bacterial genomic sequences. This enables scientists to track the spread of resistance genes and to understand the relationships between antimicrobial resistance and virulence.

NCBI Pathogen Detection integrates bacterial pathogen genomic sequences originating in food, environmental sources, and patients. It quickly clusters and identifies related sequences to uncover potential food contamination sources, helping public health scientists investigate foodborne disease outbreaks.



There has been a change to the *Isolation type / epi_type* attribute that affects *min-same/min-diff* computation. Now where an isolate has no information to support the setting *environmental/other* the Browser will no longer default to that value but instead present as *NULL*. This means that the *min-same/min-diff* values for this isolate will present as *n/a*, and other *min-same/min-diff* values for isolates clustered with this isolate may change. Please see the [Help](#) text for more details.

Learn More

[About](#)

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[Browser Factsheet](#)

[Antimicrobial Resistance Factsheet](#)

[Antimicrobial Resistance](#)

[Contributors](#)

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Data Resource

[Isolates Browser](#)

[Microbial Browser for Identification of Genetic and Genomic Elements \(MicroBIGG-E\)](#)

[Reference Gene Catalog](#)

NEW [Reference HMM Catalog](#)

1. Click MicroBIGG-E

2. Use
genes_on_contig
command to identify
contigs with blaTEM-1
and blaKPC-4

This interface contains a list of cross-browser identifiers for those isolates and contigs that have genomic sequence data available in GenBank and have genotypes identified by AMRFinder

Search

genes_on_contig:blaTEM-1 AND genes_on_contig:blaKPC-4

Restricted by current cross-browser selection. Click here to reset.

The MicroBIGG-E table and the underlying sequences may be added as cloud resources for those users interested, contact us at [support@ncz.cdc.gov](#)

3. Click Download to
obtain contig
sequences or other
data

#	Scientific name	Protein	BioSample	Isolate	Element sy...	Contig	Start	Stop	S
1	Escherichia coli	EFC8849724.1	SAMN07779623	PDT000251011.2	aph(3')-Ia	AASITL010000054.1	5176	5991	
2	Escherichia coli	EFC8849725.1	SAMN07779623	PDT000251011.2	blaTEM-1	AASITL010000054.1	6474	7334	
3	Escherichia coli	EFC8849728.1	SAMN07779623	PDT000251011.2	blaKPC-4	AASITL010000054.1	13051	13932	
4	Enterobacter horma...	EHF4974919.1	SAMN04571745	PDT000124860.2	aph(3')-Ia	AAZLBK010000038.1	11836	12651	
5	Enterobacter horma...	EHF4974920.1	SAMN04571745	PDT000124860.2	blaTEM-1	AAZLBK010000038.1	13134	13994	
6	Enterobacter horma...	EHF4974923.1	SAMN04571745	PDT000124860.2	blaKPC-4	AAZLBK010000038.1	19712	20593	
7	Enterobacter horma...	EHF4975278.1	SAMN04571745	PDT000124860.2	blaKPC-4	AAZLBK010000087.1	8223	9104	
8	Enterobacter horma...	EHF4975281.1	SAMN04571745	PDT000124860.2	blaTEM-1	AAZLBK010000087.1	14822	15682	
9	Enterobacter horma...	EHF4975282.1	SAMN04571745	PDT000124860.2	aph(3')-Ia	AAZLBK010000087.1	16165	16980	
10	Enterobacter horma...	EHF5012260.1	SAMN03657239	PDT000065097.7	aph(3')-Ia	AAZLBO010000049.1	10599	11414	
11	Enterobacter horma...	EHF5012261.1	SAMN03657239	PDT000065097.7	blaTEM-1	AAZLBO010000049.1	11897	12757	

This interface contains a subset of the isolates from the Isolate Browser that have genomic sequence data available in GenBank and have genotypes identified by AMRFinder

Search

genes_on_contig:blaTEM-1 AND genes_on_contig:blaKPC-4

Restricted by current cross-browser selection. Click here to reset.

The MicroBIGG-E table and the underlying resources for those users interested in the entire dataset. If you are interested, contact us at

Filters

Choose columns Download Cross-browser selection

Page 1 of 2

#	Scientific name	Accession	Gene	Start	Stop	Size
1	Escherichia coli	EFC8849724.1	SAMN07779623	176	5991	5815
2	Escherichia coli	EFC8849725.1	SAMN07779623	47		
3	Escherichia coli	EFC8849728.1	SAMN07779623	30		
4	Enterobacter horma...	EHF4974919.1	SAMN04571745	18		
5	Enterobacter horma...	EHF4974920.1	SAMN04571745	31		
6	Enterobacter horma...	EHF4974923.1	SAMN04571745	97		
7	Enterobacter horma...	EHF4975278.1	SAMN04571745	223	104	104
8	Enterobacter horma...	EHF4975281.1	SAMN04571745		15682	15682
9	Enterobacter horma...	EHF4975282.1	SAMN04571745	6165	16980	16980
10	Enterobacter horma...	EHF5012260.1	SAMN03657239	0599	11414	11414
11	Enterobacter horma...	EHF5012261.1	SAMN03657239	1897	12757	12757
12	Enterobacter horma...	EHF5012264.1	SAMN03657239	8475	19356	19356
13	Enterobacter horma...	EHF5023736.1	SAMN04096280	0599	11414	11414
14	Enterobacter horma...	EHF5023737.1	SAMN04096280	1897	12757	12757

4. Select Contig to download nucleotide sequences of all contigs that contain blaTEM-1 and blaKPC-4

Download

File type: Dataset (.zip)

Sequence files

Contig (contig.fna)

Element (element.fna)

Element with flanks (element_with_flanks.fna)

Flank size: 100 bases

Protein (protein.faa)

Name: ncbi_dataset.zip

Download Cancel

5. Can edit the name of the download file.

More information

- For full help documentation of the Reference Gene Catalog see:
https://www.ncbi.nlm.nih.gov/pathogens/pathogens_help/#reference-gene-catalog
- For details about filters see:
https://www.ncbi.nlm.nih.gov/pathogens/pathogens_help/#refgene-filters
- For details about the table downloads see:
https://www.ncbi.nlm.nih.gov/pathogens/pathogens_help/#refgene-access-download

Questions and further help: email pd-help@ncbi.nlm.nih.gov