

How To: Download a list of all carbapenem resistance genes and point mutations from the Reference Gene Catalog

NCBI Pathogen Detection

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



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

At a glance

- Use Reference Gene Catalog
<https://www.ncbi.nlm.nih.gov/pathogens/refgene>
- Use filters or search to select Subclass “CARBAPENEM”
- Download table

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

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[Browser Factsheet](#)

[Antimicrobial Resistance Factsheet](#)

[Antimicrobial Resistance](#)

[Contributors](#)

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Data Resources

[Isolates Browser](#)

[Microbial Browser for Isolates
Genomic Elements \(MicroBrowsers\)](#)

[Reference Gene Catalog](#)

NEW [Reference HMM Catalog](#)

1. Click Reference Gene Catalog

Search

2. Click Filters bar to show filters



db version: 2021-08

Bacterial Antimicrobial Resistance Reference Gene Database

Filters 1

Available filters



- allele
- synonyms
- gene family
- product name
- scope
- type
- subtype
- class
- subclass
- pubmed reference
- whitelisted taxa

3. Click subclass to show subclass filter

1 subclass

Search



subclass	count
<input type="checkbox"/> CEPHALOSPORIN	649
<input type="checkbox"/> BETA-LACTAM	1185
<input checked="" type="checkbox"/> CARBAPENEM	957
<input type="checkbox"/> QUINOLONE	364
<input type="checkbox"/> TETRACYCLINE	232
<input type="checkbox"/> VANCOMYCIN	229
<input type="checkbox"/> STREPTOMYCIN	213
<input type="checkbox"/> COLISTIN	212
<input type="checkbox"/> AMINOGLYCOSIDE	186
<input type="checkbox"/> MACROLIDE	171
<input type="checkbox"/> TRIMETHOPRIM	134

4. Select CARBAPENEM

- synonyms
- gene family
- product name
- scope
- type
- subtype
- class
- subclass
- pubmed reference
- whitelisted taxa
- curated refseq start
- blacklisted taxa
- genbank strand orientation
- genbank cds start
- genbank cds stop

<input type="checkbox"/> BETA-LACTAM	1185
<input type="checkbox"/> QUINOLONE	364
<input type="checkbox"/> TETRACYCLINE	232
<input type="checkbox"/> VANCOMYCIN	229
<input type="checkbox"/> STREPTOMYCIN	213
<input type="checkbox"/> COLISTIN	212
<input type="checkbox"/> AMINOGLYCOSIDE	186
<input type="checkbox"/> MACROLIDE	171
<input type="checkbox"/> TRIMETHOPRIM	134
<input type="checkbox"/> CHLORAMPHENICOL	106
<input type="checkbox"/> FOSFOMYCIN	86
<input type="checkbox"/> EFFLUX	
<input type="checkbox"/> AMIKACIN/KANAMYCIN/TOBRAMYCIN	

Total unique values: 139

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

5. Click Download button

#	allele	syn...	gen...	product name	scope	type	sub...	class	sub...	refs...	pub...	whi...	refs...	gen...	gen...	cur...
1			bla2	BcII family subclass B1 metallo-beta-l...	core	AMR	AMR	BET...	CA...	WP...			NG...	AAT...	AE0...	No
2			bla2	BcII family subclass B1 metallo-beta-l...	core	AMR	AMR	BET...	CA...	WP...			NG...	AAK...	AF3...	No
3			bla2	BcII family subclass B1 metallo-beta-l...	core	AMR	AMR	BET...	CA...	WP...			NG...	AA...	AY4...	No
4			bla2	BcII family subclass B1 metallo-beta-l...	core	AMR	AMR	BET...	CA...	WP...			NG...			
5			bla2	BcII family subclass B1 metallo-beta-l...	core	AMR	AMR	BET...	CA...	WP...	758...		NG...			

Feedback

- synonyms
- gene family
- product name
- scope
- type
- subtype
- class
- subclass
- pubmed reference
- whitelisted taxa
- curated refseq start
- blacklisted taxa
- genbank strand orientation
- genbank cds start
- genbank cds stop

<input type="checkbox"/>	BETA-LACTAM	1185
<input type="checkbox"/>	QUINOLONE	364
<input type="checkbox"/>	TETRACYCLINE	232
<input type="checkbox"/>	VANCOMYCIN	229
<input type="checkbox"/>	STREPTOMYCIN	213
<input type="checkbox"/>	COLISTIN	212
<input type="checkbox"/>	AMINOGLYCOSIDE	186
<input type="checkbox"/>	MACROLIDE	171
<input type="checkbox"/>	TRIMETHOPRIM	134
<input type="checkbox"/>	CHLORAMPHENICOL	106
<input type="checkbox"/>	FOSFOMYCIN	86
<input type="checkbox"/>	EFFLUX	85
<input type="checkbox"/>	AMIKACIN/KANAMYCIN/TOBRAMYCIN	75

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

6. Click Download to get data in tab-delimited format

Page 1 of 48 | Choose columns | Download | Displaying 1 - 20 of 957

#	allele	syn...	gen...	product name
1			bla2	BcII family subclass B1 metallo-beta-l...
2			bla2	BcII family subclass B1 metallo-beta-l...
3			bla2	BcII family subclass B1 metallo-beta-l...
4			bla2	BcII family subclass B1 metallo-beta-l...
5			bla2	BcII family subclass B1 metallo-beta-l...

Download ✕

Type: Tab-delimited (.tsv) ▼

Name: refgenes.tsv

Download
Cancel

whi...	refs...	gen...	gen...	cur...
NG...	AAT...	AE0...	No	
NG...	AAK...	AF3...	No	
NG...	AA...	AY4...	No	
NG...				
NG...				

Feedback

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