BSgenome.Ecoli.NCBI.20080805

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`BSgenome.Ecoli.NCBI.20080805`

Escherichia coli full genomes

Description

Escherichia coli full genomes for several strains as provided by NCBI on 2008/08/05 and stored in Biostrings objects.

Details

The genome of Escherichia coli is made of a single circular DNA sequence. The full genomes for the following strains are present in this package (one sequence per strain):

Escherichia coli 536

```
Taxonomy ID: 362663
Other names: "Escherichia coli strain 536", "Escherichia coli str. 536"
Refseq: NC_008253
Length: 4,938,920 nt
Seq.Status: Completed
Sequencing center: University of Goettingen
Completed: 2006/07/24
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_536/NC_008253.fna
```

Escherichia coli APEC O1

```
Taxonomy ID: 405955
Other names: "Escherichia coli strain APEC O1", "Escherichia coli str. APEC O1"
Refseq: NC_008563
Length: 5,082,025 nt
Seq.Status: Completed
Sequencing center: Iowa State University
Completed: 2006/11/08
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_APEC_O1/NC_008563.fna
```

Escherichia coli ATCC 8739

```
Taxonomy ID: 481805
Other names: "Escherichia coli C (ATCC 8739)", "Escherichia coli C str. ATCC 8739", "Escherichia col
Refseq: NC_010468
Length: 4,746,218 nt
Seq.Status: Completed
Sequencing center: US DOE Joint Genome Institute (JGI-PGF)
Completed: 2008/03/17
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_C_ATCC_8739/NC_010468.fna
```

Escherichia coli CFT073

```
Taxonomy ID: 199310
Other names: "Escherichia coli strain CFT073", "Escherichia coli str. CFT073"
Refseq: NC_004431
Length: 5,231,428 nt
Seq.Status: Completed
Sequencing center: Univ. Wisconsin
Completed: 2002/12/09
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_CFT073/NC_004431.fna
```

Escherichia coli E24377A

```
Taxonomy ID: 331111
Refseq: NC_009801
Length: 4,979,619 nt
Seq.Status: Completed
Sequencing center: TIGR
Completed: 2007/09/13
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_E24377A/NC_009801.fna
```

Escherichia coli HS

```
Taxonomy ID: 331112
Refseq: NC_009800
Length: 4,643,538 nt
Seq.Status: Completed
Sequencing center: TIGR
Completed: 2007/09/13
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_HS/NC_009800.fna
```

Escherichia coli O157:H7 EDL933

```
Taxonomy ID: 155864
Refseq: NC_002655
Length: 5,528,445 nt
Seq.Status: Completed
Sequencing center: Univ. Wisconsin
Completed: 2001/09/27
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_O157H7_EDL933/NC_002655.fna
```

Escherichia coli O157:H7 str. Sakai

```
Taxonomy ID: 386585
Other names: "Escherichia coli O157:H7 strain Sakai"
```

```
Refseq: NC_002695
Length: 5,498,450 nt
Seq.Status: Completed
Sequencing center: GIRC
Completed: 2001/10/02
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_O157H7/NC_002695.fna
```

Escherichia coli SMS-3-5

```
Taxonomy ID: 439855
Other names: "Escherichia coli strain SMS-3-5", "Escherichia coli str. SMS-3-5"
Refseq: NC_010498
Length: 5,068,389 nt
Seq.Status: Completed
Sequencing center: TIGR
Completed: 2008/03/24
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_SMS_3_5/NC_010498.fna
```

Escherichia coli UTI89

```
Taxonomy ID: 364106
Other names: "Escherichia coli strain UTI89", "Escherichia coli str. UTI89"
Refseq: NC_007946
Length: 5,065,741 nt
Seq.Status: Completed
Sequencing center: Washington University (WashU)
Completed: 2006/04/07
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_UTI89/NC_007946.fna
```

Escherichia coli str. K12 substr. DH10B

```
Taxonomy ID: 316385
Other names: "Escherichia coli DH10B", "Escherichia coli strain K12 substrain DH10B"
Refseq: NC_010473
Length: 4,686,137 nt
Seq.Status: Completed
Sequencing center: University of Wisconsin-Madison
Completed: 2008/03/17
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_K_12_substr__DH10B/NC_010473.fna
```

Escherichia coli str. K12 substr. MG1655

```
Taxonomy ID: 511145
Other names: "Escherichia coli MG1655", "Escherichia coli strain MG1655", "Escherichia coli str. MG
Refseq: NC_000913
Length: 4,639,675 nt
Seq.Status: Completed
Sequencing center: Univ. Wisconsin
Completed: 2001/10/15
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_K12_substr__MG1655/NC_000913.fna
```

Escherichia coli str. K12 substr. W3110

```
Taxonomy ID: 316407
Other names: "Escherichia coli W3110", "Escherichia coli strain W3110", "Escherichia coli str. W311
Refseq: AC_000091
Length: 4,646,332 nt
Seq.Status: Completed
Sequencing center: Nara Institute of Science and Technology
Completed: 2006/03/01
File: ftp://ftp.ncbi.nih.gov/genomes/Bacteria/Escherichia_coli_W3110/AC_000091.fna
```

Note

This BSgenome data package was made from the following source data files:

```
Escherichia_coli_536/NC_008253.fna
Escherichia_coli_APEC_O1/NC_008563.fna
Escherichia_coli_C_ATCC_8739/NC_010468.fna
Escherichia_coli_CFT073/NC_004431.fna
Escherichia_coli_E24377A/NC_009801.fna
Escherichia_coli_HS/NC_009800.fna
Escherichia_coli_O157H7_EDL933/NC_002655.fna
Escherichia_coli_O157H7/NC_002695.fna
Escherichia_coli_SMS_3_5/NC_010498.fna
Escherichia_coli_UTI89/NC_007946.fna
Escherichia_coli_K_12_substr__DH10B/NC_010473.fna
Escherichia_coli_K12_substr__MG1655/NC_000913.fna
Escherichia_coli_W3110/AC_000091.fna
from ftp://ftp.ncbi.nih.gov/genomes/Bacteria/ (downloaded on 2008/08/05)
```

See ?BSgenomeForge and the BSgenomeForge vignette (`vignette("BSgenomeForge")`) in the **BSgenome** software package for how to make a BSgenome data package.

Author(s)

The Bioconductor Dev Team

See Also

- BSgenome objects and the `available.genomes` function in the **BSgenome** software package.
- DNAString objects in the **Biostrings** package.
- The BSgenomeForge vignette (`vignette("BSgenomeForge")`) in the **BSgenome** software package for how to make a BSgenome data package.

Examples

```
BSgenome.Ecoli.NCBI.20080805
genome <- BSgenome.Ecoli.NCBI.20080805
seqlengths(genome)
## The names of the sequences are the Refseq numbers!
```

```
genome$NC_008253  # same as genome[["NC_008253"]]

## ---------------------------------------------------------------------
## Genome-wide motif searching
## ---------------------------------------------------------------------
## See the GenomeSearching vignette in the BSgenome software
## package for some examples of genome-wide motif searching using
## Biostrings and the BSgenome data packages:
if (interactive())
    vignette("GenomeSearching", package="BSgenome")
```

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