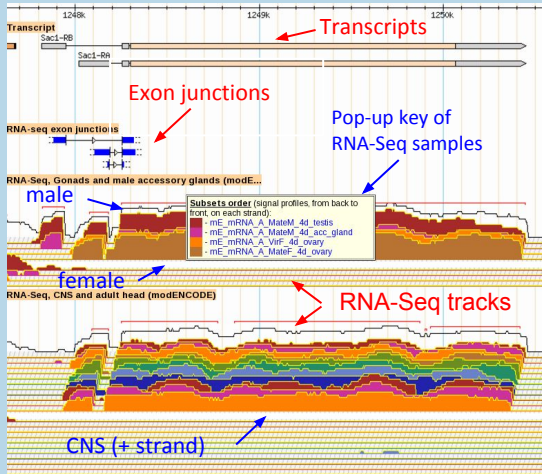


Genomic Data: GBrowse/JBrowse

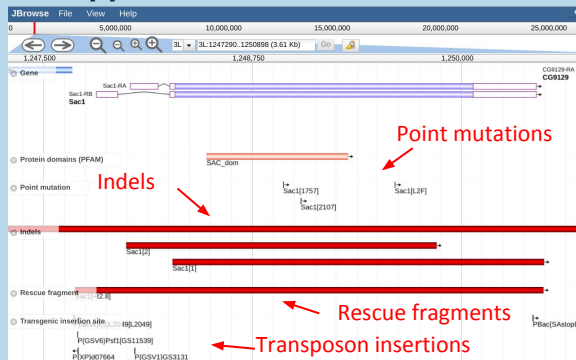
~100 tracks of diverse genomic data displayed in GBrowse genome viewer including gene models, TSS data, protein domains, regulatory features, and much more...

RNA-Seq expression and exon junctions/ GBrowse



FlyBase's unique "topview" display allows many RNA-Seq samples to be viewed at once. Click on wrench icon to change from log2 to linear scale.

Mapped Mutations/ JBrowse view



Point mutations, indels, rescue fragments, insertions shown and linked to FlyBase reports.

Featured Tool: Feature Mapper

Access Feature Mapper via the Tools menu, under the "Genomic/Map Tools" sub-menu. Enter a symbol, ID, or genome coordinates.

Mapping Options

Reference Landmark(s) or Region(s)
Enter ID, Symbol, annotation ID or Sequence Region:
3L:1,247,600..1,250,899

Set region type to map
[Sequence of the Landmark] (selected)
 Include overlapping (not fully enclosed within query region) features

Species: *D. melanogaster*

Map Features:

- Gene Models
 - Genes
 - mRNA (transcript)
 - exon
 - five_prime_UTR
 - three_prime_UTR
 - tRNA
 - miRNA
 - snRNA
 - snoRNA
 - CDS (polypeptide)
 - Natural TE
 - Aligned Evidence
 - cDNA
 - RNA-seq Exon Junctions
 - Peptide Atlas peptides
- Noncoding Features
 - Regulatory Regions
 - Insulator class I
 - Insulator class II
 - Protein binding site
 - Enhancers
 - Silencers
 - TFBS - HOT spot analysis
 - TFBS - zinc finger domain
 - TFBS - homeodomain
 - TFBS - helix-loop-helix domain
 - TFBS - BTB/POZ domain
 - TFBS - mesoderm
 - TFBS - other
 - Origin of replication
 - Histone Modifications - mesoderm
 - RNA Editing Sites
 - Putative Brain Enhancers
 - VDRC Vienna Tiles GAL4 lines
 - Microarray Features
 - Affymetrix v1
 - Affymetrix v2
- Mapped Mutations
 - Transgene insertion sites
 - Point Mutation
 - Sequence Variant
 - Uncharacterized Change in Seq.
 - Aberration Junction
 - Complex Substitution
 - Indels
 - Rescue Fragment
 - RNAi Reagents and Data
 - DGRC-1 amplicons
 - DGRC-2 oligos
 - DRSC RNAi amplicons
 - VDRC RNAi amplicons
 - TRIP RNAi amplicons
 - BKNA RNAi amplicons
 - HFA RNAi amplicons
 - NIG-Fly RNAi amplicons

Check all Uncheck all

Group output features by type

Check the types of features you wish to retrieve.

Combined GFF file

3L:1,247,600..1,250,899

All features GFF file

Genes	Gene	Strand	Symbol
3L:1246986..1247677	← gene	←	Psf1
3L:1247817..1250451	→ gene	→	Sac1
3L:1250596..1251778	→ gene	→	CG9129

Exons	Gene	Strand	Symbol
3L:1246986..1247677	← exon	←	_0_
3L:1247817..1247947	→ exon	→	_1_
3L:1248020..1248188	→ exon	→	_2_
3L:1248258..1250451	→ exon	→	_3_
3L:1250596..1251778	→ exon	→	_4_

cDNA and Aligned genomic sequences

Gene	Strand	Symbol
3L:1246986..1247677	← cDNA_cDNA	IP07275-BT025002-na_cDNA_ncbi_other_20140813-splign
3L:1248019..1250455	← cDNA_cDNA	GH08349-AY047571-na_cDNA_ncbi_other_20140813-splign
3L:1250696..1251780	→ cDNA_cDNA	FI08042-8T043379-na_cDNA_ncbi_other_20140813-splign
3L:1250696..1251780	→ cDNA_cDNA	AT26009-AV089443-na_cDNA_ncbi_other_20140813-splign

Point Mutations

Gene	Strand	Symbol
3L:1248936..1248936	→ point_mutation	Sac1[1757]
3L:1248941..1249041	→ point_mutation	Sac1[2107]
3L:1249603..1249603	→ point_mutation	Sac1[21]

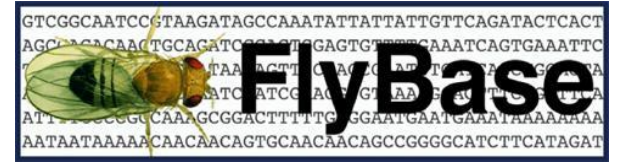
DRSC RNAi amplicons

Gene	Strand	Symbol
3L:1250123..1250352	→ Blasin_dsRNA	DRSC37062-1713_20090330-blasin
3L:1247129..1247816	← Dmel_r3_r4_r5_dsRNA	DRSC08638-8227_20090331-dmel_r3_r4_r5
3L:1247363..1247645	← Dmel_r3_r4_r5_dsRNA	DRSC24486-21976_20090331-dmel_r3_r4_r5
3L:1248288..1248668	→ Dmel_r3_r4_r5_dsRNA	DRSC34470-30678_20090331-dmel_r3_r4_r5

Returns a table of features in region sorted by type with genomic location, links to reports, and option to export to a HitList for further querying. GFF also available.

7 matches Convert to [Sequence Features] Results Analysis/Refinement HitList Conversion Tools

#	Symbol	Library/Collection	Type	Species
1	DRSC08622	DRSC_dsRNA	RNAi_reagent	Dmel
2	DRSC08638	DRSC_dsRNA	RNAi_reagent	Dmel
3	DRSC24486	DRSC_dsRNA	RNAi_reagent	Dmel
4	DRSC26886	DRSC_dsRNA	RNAi_reagent	Dmel
5	DRSC34470	DRSC_dsRNA	RNAi_reagent	Dmel
6	DRSC34471	DRSC_dsRNA	RNAi_reagent	Dmel
7	DRSC37062	DRSC_dsRNA	RNAi_reagent	Dmel



A Database of *Drosophila* Genes and Genomes

General Information

QuickSearch

Video Tutorials

Gene Group Reports

Data Downloads

Fly Reagents

Genomic Data

Feature Mapper

www.flybase.org

FlyBase is supported by a grant from the National Human Genome Research Institute at the U.S. National Institutes of Health #U41 HG000739. Support is also provided by the British Medical Research Council and the Indiana Genomics Initiative.

QuickSearch (Beyond SimpleSearch)

Data Class Search

Human Disease Expression Phenotype GO References

Simple Orthologs Protein Domains Gene Groups Data Class

Species: include non-Dmel species

Search: ID/Symbol/Name All text

Data Class: Allele

°Enter text:

- All data types
- Aberration
- Allele
- Anatomy Ontology
- Balancer
- Cell Line
- Clone
- Development Ontology
- Disease Ontology
- FlyBase Ontology
- Gene

- Search any single data class, or all data classes.
- Robust autocomplete.
- Precise results.

Specialized Search Tabs

Human Disease Expression Phenotype GO References

Simple Orthologs Protein Domains Gene Groups Data Class

Search by Author Year Abstract Journal Pub type ID All

Author^o e.g. 'Smith NOT Johnson'

Year e.g. '2004-2008', '>2001', etc.

Publication type^o e.g. 'paper', 'review', etc.

- Search very specific data.
- Includes our newest data classes.
- Allows complex searches of some data classes.

Video Tutorials

Uploads



Finding related genes in FlyBase
The Gene Ontology
122 views • 2 months ago

Created playlists



Basic navigation series

Learn to navigate FlyBase with our handy video tutorials on our YouTube channel, **FlyBase TV**,

Help Archives

FAQs

FlyBase Guides

Video Tutorials

Report Help

Author guidelines

which can be accessed from the FlyBase Help menu. The 'Basic Navigation' series is ideal for new users, while other videos highlight specific tools and are designed to help users make the most of FlyBase features.

Featured Report: Gene Group

'Gene Groups' are ready-to-use sets of functionally related genes/gene products, as described in the *Drosophila* literature or expert databases. They include: gene families (e.g. actins), gene products sharing a molecular function (e.g. protein kinases) and subunits of macromolecular complexes (e.g. spliceosome).

General Information			
Name	CULLINS	Species	<i>D. melanogaster</i>
Symbol	CUL	FlyBase ID	FBgg000131
Date last reviewed	2014-02-27	Number of members	6
Description			
Description	Cullins are an evolutionarily conserved, structurally-related gene family, with an N-terminal bearing cullin repeats followed by a cullin homology domain and a neddylation site. Cullins act as scaffolds to assemble multi-subunit Cullin-RING E3 ubiquitin ligase (CRL) complexes. A CRL complex is characterised by a cullin-RING-type E3 ubiquitin ligase interaction, which acts as the catalytic core and recruits the E2 ubiquitin-conjugating enzyme, and a cullin-adapter protein-substrate recognition protein interaction which links the E3 ligase to its target for ubiquitination. (Adapted from FB024296).		
Notes on Group	The CULLINS Gene Group has been compiled by FlyBase curators using the following publication(s): Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, and Sankas et al., 2011.		
Source Material	The CULLINS Gene Group has been compiled by FlyBase curators using the following publication(s): Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, and Sankas et al., 2011.		
Key Gene Ontology (GO) terms			
Molecular Function	ubiquitin protein ligase binding		
Biological Process	protein ubiquitination		
Cellular Component	cullin-RING ubiquitin ligase complex		
Related Gene Groups			
Other related group(s)	F BOX PROTEINS ROC UBIQUITIN LIGASES SKP1 GENE FAMILY		
Members (6)			
For all members: View Orthologs Export to HitList Export to Batch Download			
Gene Symbol	Gene Name	Also Known As	Source Material for Membership
Cu1	Cullin 1	ln19, cul-1, uCul1, I202074, I2021207	(Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, Sankas et al., 2011)
Cu2	Cullin 2	cul-2, I202074	(Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, Sankas et al., 2011)
Cu3	Cullin 3	gh, Cul-3, I202074, I202074, I202074	(Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, Sankas et al., 2011)
Cu4	Cullin 4	Cul-4, dCul4	(Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, Sankas et al., 2011)
Cu5	Cullin 5	cul-5	(Du et al., 2011, Roberts et al., 2012, Ayyub, 2011, Sankas et al., 2011)
External Data			
Equivalent Group(s)	Human Cullins (HGNC) Nematode Cullins (WormBase)		
Other resource(s)			
Synonyms and Secondary IDs			
References (6)			

Notice the **Members** table facilitates further analysis by including three handy buttons:

- View Orthologs
- Export to Hit List
- Export to Batch Download

Use **QuickSearch** to find/browse Gene Groups:

QuickSearch

Human Disease Expression Phenotype GO References

Simple Orthologs Protein Domains Gene Groups Data Class

Search using a gene or Gene Group symbol, name, synonym or ID.

Enter text: e.g. ACTINS, ACT, Act5C

Alternatively, browse all Gene Groups

Data Downloads

Precomputed Files

Gene data
Genome sequences
Transgenic insertions
FBgn ↔ CG

And much more!

Batch Download

Batch Download

Output Format

- FASTA Sequence
- Database Format
Full Data Only
- Field Data
Selected Fields Only

Output Options

Gene region

Chado XML

As HTML table

Send results to:

Browser

Enter IDs, Symbols or Sequence Coordinates:

or Upload File of IDs:
Choose File No file chosen

You may enter FlyBase IDs, Symbols, Annotation Symbols, Clone Names or PubMed IDs.

Allow synonyms

Select fields

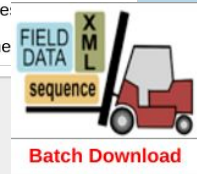
Reset

Downloads Links

Overview
Current release
Archived releases
Map Conversion

FTP site:

Release:
Genome



Batch Download

1. Choose output data type.
2. Input FB symbols or identifiers.
3. Choose fields for display.

Obtaining Fly Reagents

Stocks and Reagents

Scroll down on any Gene Report for the **Stocks and Reagents** table.

Stocks and Reagents
Stocks Listed in FlyBase (146)
Genomic Clones (18)
cDNA Clones (68)
RNAi and Array Information
Antibody Information

Expand any section for links and additional information.