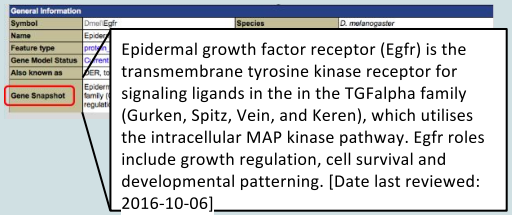
Gene Snapshots

Gene Snapshots are short, manually curated summaries designed to provide a quick overview of the function of a gene's products. They appear at the top of each gene report, and are downloadable to use as an aid in genome-wide analyses and screens via our Batch Download tool and our precomputed file page. Further information, including the list of contributors and a link to the submission form, can be found in the Gene Snapshot wiki page, reachable from the FlyBase Home page Community menu.

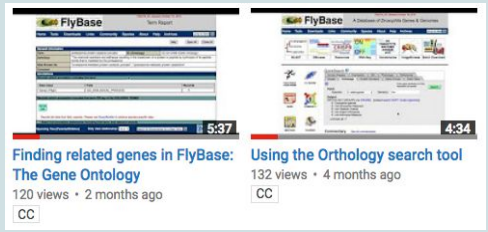


FlyBase release 2017_01 includes 1901 Gene Snapshots

Video Tutorials

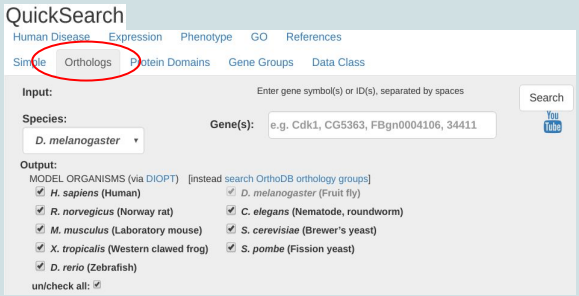
We now regularly post short video tutorials on our YouTube channel, **FlyBase TV**, to help users get the most out of FlyBase features and tools. These can be accessed from the Help menu on any FlyBase page or via links on specific tools. Tutorials added in the last year have covered:

- Orthology searches
- The 'Gene Group' resource
- The 'Vocabularies' tool
- Searching Gene Ontology annotations



Orthology Updates

Orthology predictions between humans, flies and other model organisms (via DIOPT), as well as between species more closely related to *D. melanogaster* (via OrthoDB), are searchable through the **Orthologs** tab of QuickSearch:



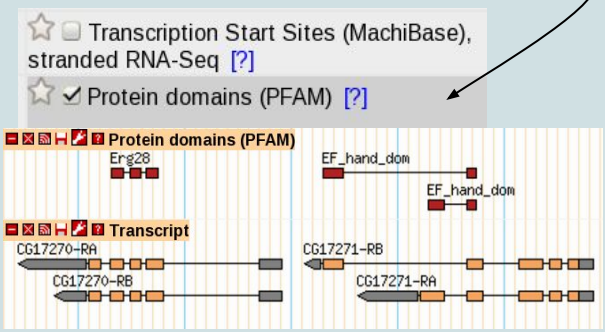
The DIOPT dataset now includes *R. norvegicus* data and 13 separate prediction pipelines. The OrthoDB dataset will soon include 46 species.

Protein Domains

Visualization options for protein domains have been added.

In GBrowse:

In the section "Aligned Evidence" there is a new option: "Protein domains (PFAM)"



In Gene Reports:

FlyBase

What's New 2017

- Multi-species Mining
- New Hit Lists
- GO Summary Ribbons
- Author Reagent Table
- Gene Snapshots
- Video Tutorials
- Orthology Updates
- Protein Domains

www.flybase.org

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Multi-species Mining

From the FlyBase home page there will be direct links to two valuable new community tools: **G**ene**2F**unction and **MARRVEL.**

Gene**2F**unction -- **G2F** -- allows queries for genes or diseases across human and model organisms. (Hu *et al*. In preparation.) A **gene query** returns an ortholog table extended to include links to specific data types, including GO annotations, associated diseases, interactions, phenotypes, expression and publications.

Symbol	Human Disease Terms	Species Name	GO Process Counts	Protein Interaction Counts
PARK2	8	Human (Homo sapiens)	69	407
Park2	NA	Mouse (Mus musculus)	31	23
Park2	NA	Rat (Rattus norvegicus)	19	9
park2	NA	Zebrafish (Danio rerio)	5	0
park	NA	Fly (Drosophila melanogaster)	21	16
pdr-1	NA	Worm (Caenorhabditis elegans)	8	11

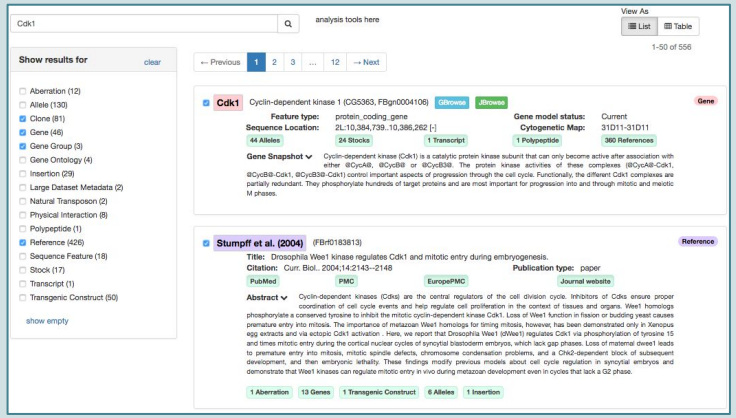
MARRVEL, **M**odel organism **A**ggregated **R**esources for **R**are **V**ariant **ExpL**oration, is designed to facilitate the use of public genetic resources to prioritize rare human gene variants for study in model organisms. (Wang *et al*. AJHG. In revision.)

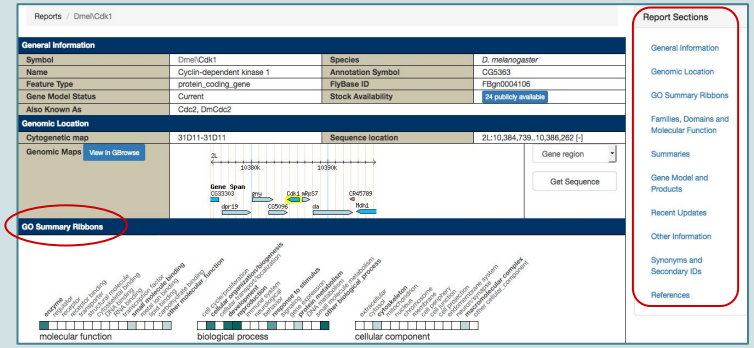
Human Gene Symbol: Please use official HGNC Gene Symbol. E.g. FBXL4

Human Variant (hg19): E.g. 6:99365567 T>C

Example: 6:99365567 T>C / FBXL4 or 6:99365567 T>C or FBXL4

Coming Soon: Improved Hit Lists, Easier Report Navigation and GO Summary Ribbons





A **beta release** containing several new features and enhancements to FlyBase is now available for testing by clicking the link in the banner of the main FlyBase site.

Hit Lists (top left) now include faceted searching and can be toggled between 'list' or 'table' views. List view includes more information and links; table view is more compact and allows sorting by column.

Report pages (bottom left) include a **navigation panel** that moves as you scroll and an **enhanced Reference section**. Gene Reports include new '**GO Summary Ribbons**' that provide an overview of Gene Ontology (GO) annotations for that gene.

Author Reagent Table (for more info, see poster)

Data type	Experimental species	Symbol/name used in publication	Source – public	Source – published	Source – unpublished	Identifiers
gene (source not applicable)	D. melanogaster	nito	NA	NA	NA	FB:FBgn0027548; NCBI:35756
gene (source not applicable)	D. melanogaster	Sxl	NA	NA	NA	FB:FBgn0264270; NCBI:3772180
genetic reagent (in whole organism)	D. melanogaster	w[1118]			N. Perrimon lab	FB:FBal0018186
genetic reagent (in whole organism)	D. melanogaster	MTD-Gal4	Bloomington Drosophila Stock Center			BDSC:31777; FB:FBtp0001612
genetic reagent (in whole organism)	D. melanogaster	ap-Gal4	Bloomington Drosophila Stock Center			BDSC:3041; FB:FBti0002785
genetic reagent (in whole organism)	D. melanogaster	nub-Gal4		PMID: 20798049		FB:FBti0016825
genetic reagent (in whole organism)	D. melanogaster	nito[1]		this paper		
antibody	NA	anti-Nito (rabbit)				
antibody	NA	anti-alpha-Spectrin (mouse)	Developmental Studies Hybridoma B			
other	NA	DAPI stain	Molecular Probes			
cell line	D. melanogaster	S2				
recombinant DNA reagent	NA	pAGW (Gateway vector)	Drosophila Genomics Resource Cent			
recombinant DNA reagent	NA	pAHW (Gateway vector)	Drosophila Genomics Resource Cent			
recombinant DNA reagent	D. melanogaster	GH11110 (cDNA)	Drosophila Genomics Resource Cent			

Now in use at Genetics and G3! Take a look at the submission form designed for reporting information about genes, strains, cell lines and other reagents used in a publication. flybase.org/journal/reagent_form/Reagents_template.xlsx