

## New in

Author Reagent Form Human Video Tutorials
Gene Snapshots
Orthology Community
Resources

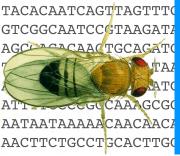
## Where to find this talk



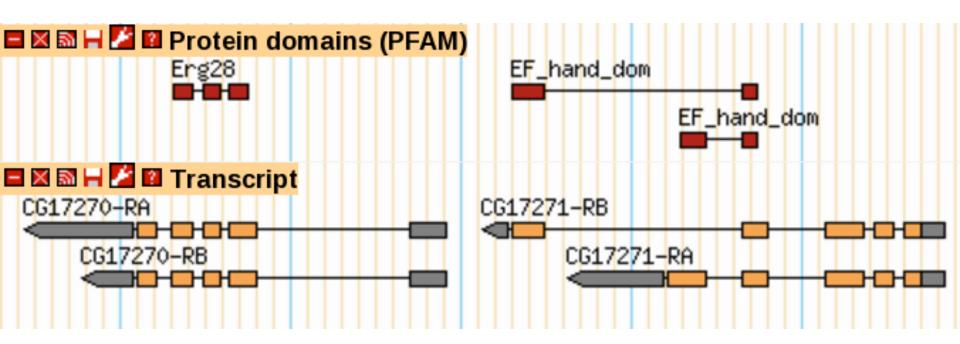
These slides are posted on FlyBase.

Key details are in pamphlets.

See our posters.

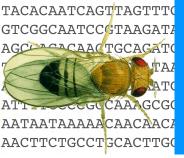


### **Protein Domains**



### Now available in GBrowse

Find the track in the "Aligned Evidence" section.



### **Protein Domains**



#### Beta-TrCP\_D (PF12125)

#### **Description:**

D domain of beta-TrCP [pfam]

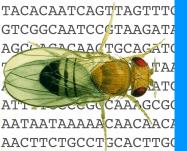
#### Coordinates:

48 - 85

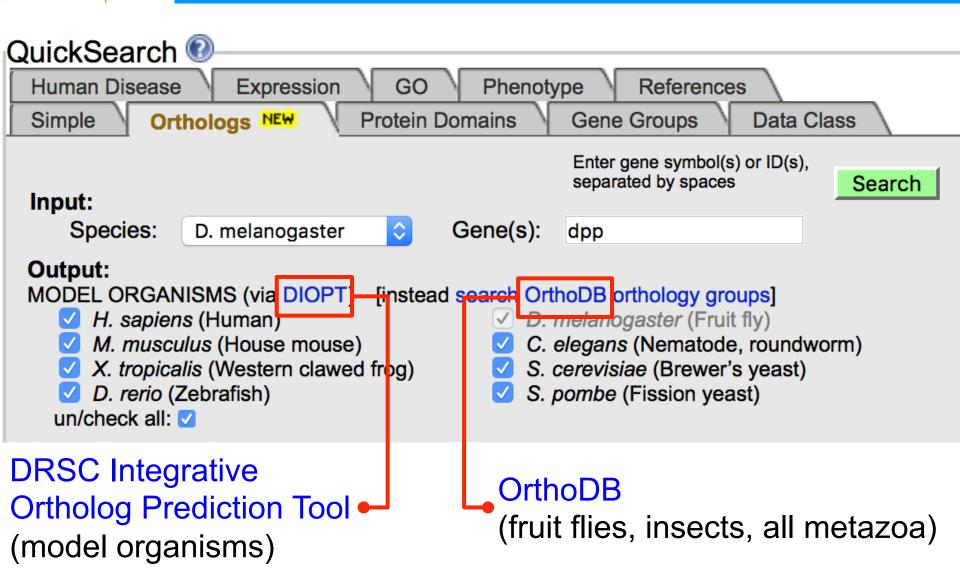
Poster (demo room)

Jim Thurmond - Improvements for 2016

597



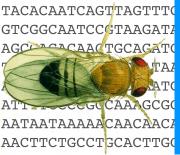
## **Orthology Data**



## **Orthology Data**

Save results as tsv file Help

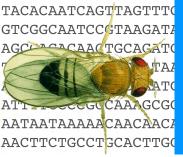




## **Orthology Data**

#### View orthologs in Gene Reports

- Orthologs
- **★** Model Organism Orthologs (via DIOPT v5.1.1) (19)
- Orthologs (via OrthoDB v7) (47)



## **Orthology Data**

### Poster D1529A

Steven J. Marygold - Enhanced orthology data in FlyBase.\* (Techniques Resources)

Thursday 2:30 - 3:30 PM Friday 1:30 - 2:10 PM Saturday 10:00 - 11:00 AM

\*In collaboration with the DRSC (Claire Hu).

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## Human Disease Model Report

General Information						
Name	amyotrophic lateral sclerosis 8	FlyBase ID	FBhh0000020			
Disease Ontology	DOID:0050752	Parent Disease	amyotrophic lateral sclerosis			
ID						
OMIM	AMYOTROPHIC LATERAL SCLEROSIS 8;	Parent Disease	DOID:332			
	ALS8	DOID				

#### Overview

This report describes amyotrophic lateral sclerosis 8 (ALS8), which is a subtype of amyotrophic lateral sclerosis. The human gene implicated in this disease is VAPB, which is a member of the vesicle-associated membrane protein (VAMP)-associated protein (VAP) family. This gene is also associated with the disease spinal muscular atrophy, late-onset, Finkel type (OMIM:182980, FBhh0000254). There is a single fly ortholog, Vap-33A, for which classical amorphic and hypomorphic alleles, RNAi-targeting constructs, and alleles caused by insertional mutagenesis have been generated.

Multiple UAS constructs of the human gene have been introduced into flies, including wild-type VAPB and genes carrying mutational lesions implicated in ALS8 and SMAFK; phenotypes similar to aspects of the human disease are observed. Heterologous rescue has been demonstrated for one or more Dmel\Vap-33A loss-of-function phenotypes.

For loss-of-function mutations in the Dmel\Vap-33A gene, observed phenotypes include aspects similar to the human disease. Physical interactions of the Dmel\Vap-33A protein product have been curated and may be found in the FlyBase report for that gene. Phenotypic assays using the human and fly genes have allowed characterization of genetic interactions.

[updated April 2016 by FlyBase; FBrf0222196]

- Disease Summary Information
- **→** Related Diseases
- Ortholog Information
- **€** D. melanogaster Gene Information (1)
- Synthetic Gene(s) Used (0)
- **⊕** Experimental Findings
- **❸** Summary of Physical Interactions (16 groups)
- ♣ Alleles Reported to Model Human Disease (Disease Ontology) (9 alleles)
- **母** Genetic Tools, Stocks and Reagents
- **⊞** References (16)

Overview of disease and fly model

Genetic Tools, Stocks and Reagents

References (16)

# Human Disease Model Report

General Information						
Name	amyotrophic lateral sclerosis 8	FlyBase ID	FBhh0000020			
Disease Ontology ID	DOID:0050752	Parent Disease	amyotrophic lateral scle	erosis		
MIMC	AMYOTROPHIC LATERAL SCLEROSIS 8; ALS8	Parent Disease DOID	DOID:332			
verview						
	This report describes amyotrophic lateral sold The human gene implicated in this disease is protein (VAMP)-associated protein (VAP) fam atrophy, late-onset, Finkel type (OMIM:18298 classical amorphic and hypomorphic alleles, mutagenesis have been generated.  Multiple UAS constructs of the human gene is carrying mutational lesions implicated in ALS are observed. Heterologous rescue has been phenotypes.  For loss-of-function mutations in the DmelNikhuman disease. Physical interactions of the lin the FlyBase report for that gene. Phenotypes.	s VAPB, which is a memb ily. This gene is also asso 30, FBhh0000254). There RNAi-targeting construct have been introduced into 88 and SMAFK; phenotyp of demonstrated for one of ap-33A gene, observed p	Related huma spinal muscular Related Specific OMIM phenot Amyotrophic la	seases In health report(s) In a trophy, late onse Ic Diseases Iypic series Iteral sclerosis	Amyotrophic Lateral Sclerosis	
B. Diesees Summe	characterization of genetic interactions.  [updated April 2016 by FlyBase; FBrf02221]	6]	Disease	Associated Human gene(s)	Drosophila model	Human transgene Drosophila
Related	Diseases		ALS1	SOD1	amyotrophic lateral sclerosis 1	у
	r Gene Information (1)		ALS4	SETX		
Synthetic Gene			ALS5	SPG11		
Experimental Fire	ndings					
Summary of Phy	vsical Interactions (16 groups)					
	At Madallhouse Diagram (Diagram Ostalan)	t) (O allolos)				
Alleles Reported	i to Model Human Disease (Disease Ontology	(9 alleles)				

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母 Genetic Tools, Stocks and Reagents

References (16)

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	Multiple UAS constructs of the human gene harmonic carrying mutational lesions implicated in ALS are observed. Heterologous rescue has been	8 and SMAFK; phenoty	des similar to a	ene(s) in FlyBase	
	phenotypes.  For loss-of-function mutations in the Dmel\Vap-33A gene, observed phenotypes in human disease. Physical interactions of the Dmel\V p-33A protein product have be in the FlyBase report for that gene. Phenotypic assa is using the human and fly ger		roduct have be		Hsap\VAPB
	characterization of genetic interactions.	21	Human ge	ene (HGNC)	
	[updated April 2016 by FlyBase; FBrf0222196	5]			
Disease Summa	ry Information	_	Symbol	/ Name	VAPB; VAMP (v
	Information	_	D. melar	nogaster ortholog	Dmel\Vap-33A
Synthetic Gene(s					
Experimental Fire	dings				
● Summary of Phy	sical Interactions (16 groups)				
Alleles Reported	to Model Human Disease (Disease Ontology	) (9 alleles)			

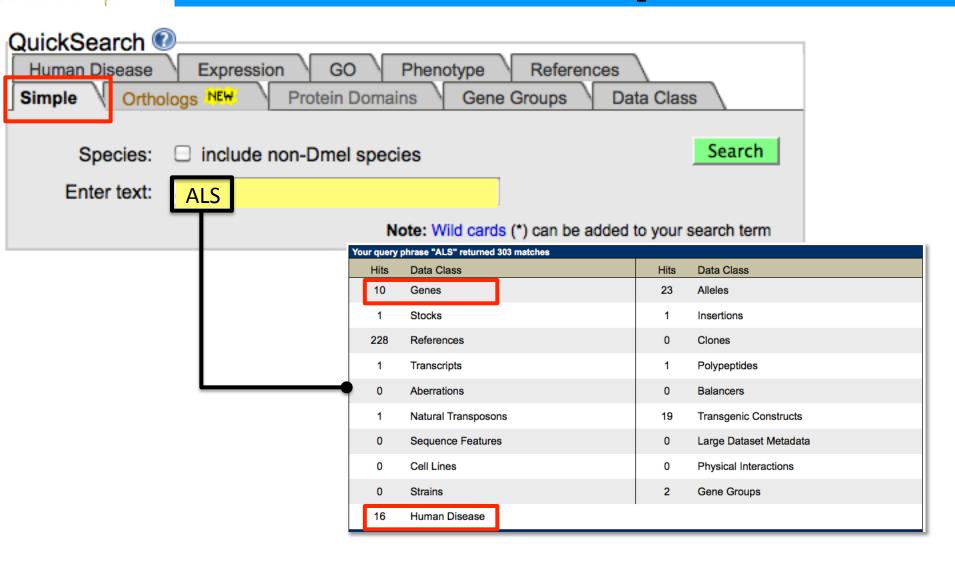
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References (16)

# Human Disease Model Report

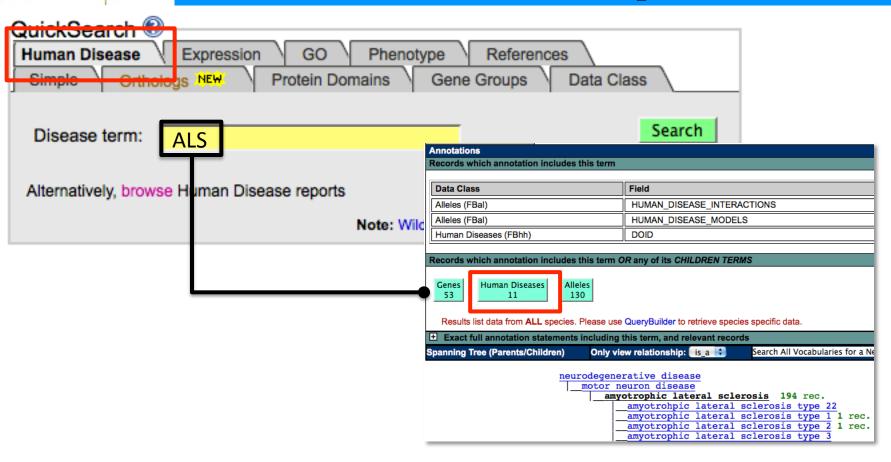
lame	amyotrophic lateral sclerosis 8	FlyBase ID	FBhh0000020			
isease Ontology	DOID:0050752	Parent Disease	amyotrophic lateral s	clerosis		
D						
OMIM	AMYOTROPHIC LATERAL SCLEROSIS 8;	Parent Disease	DOID:332			
	ALS8	DOID				
verview						
	This report describes amyotrophic lateral scle					
	The human gene implicated in this disease is					
	protein (VAMP)-associated protein (VAP) family	,				
	atrophy, late-onset, Finkel type (OMIM:182980					
	classical amorphic and hypomorphic alleles, F	RNAi-targeting	Alleles Reported to Model Huma	n Disease (Disease Ontology) (9 alleles)		
	mutagenesis have been generated.	Vap	-33A			
	Multiple UAS constructs of the human gene h	ave been intro	Models	-		
	carrying mutational lesions implicated in ALS8		ele p-33A <sup>T48I.Scer\UAS</sup>	Disease model of amyotrophic lateral sclerosis	inferred from mutant phenotype	(Chen et al., 2010)
	are observed. Heterologous rescue has been demonstrated phenotypes.  For loss-of-function mutations in the Dmel\Vap-33A gene, of		p-33A <sup>Scer\UAS.cPa</sup>	model of neurodegenerative disease	inferred from mutant phenotype	(Sanhueza et al., 2014)
			p-33AP58S.cRa.Scer\UAS	model of amyotrophic lateral sclerosis	inferred from mutant phenotype	(Ratnaparkhi et al., 2008)
			p-33AP58S.Scer\UAS.T:Zzzz\FLAG	model of amyotrophic lateral sclerosis	inferred from mutant phenotype	(Forrest et al., 2013)
			p-33AP58S.Scer\UAS	model of amyotrophic lateral sclerosis	inferred from mutant phenotype	(Tsuda et al., 2008)
	human disease. Physical interactions of the D			model of motor neuron disease	inferred from mutant phenotype	(Chai et al., 2008)
	in the FlyBase report for that gene. Phenotypic	c assays using Va	p-33A <sup>V260I.Scer\UAS</sup>	model of neurodegenerative disease	inferred from mutant phenotype	(Sanhueza et al., 2014)
	characterization of genetic interactions.	Va	p-33A <sup>∆31</sup>	model of amyotrophic lateral sclerosis type 8	inferred from mutant phenotype	(Moustaqim-Barrette et al., 2014)
			00 4 Al CO	model of amyotrophic lateral sclerosis type 8	in combination with Vap-33AALS8	(Moustaqim-Barrette et al., 2014)
	[updated April 2016 by FlyBase; FBrf0222196]		p-33A <sup>ALS8</sup>	model of amyotrophic lateral sclerosis type 8	in combination with Vap-33A <sup>∆31</sup>	(Moustagim-Barrette et al., 2014)
D. Dianasa Cumma			Interactions ele	Disease	Interaction	References
Disease Summa	iry information		p-33A <sup>∆448</sup>	ameliorates tauopathy	modeled by Hsap\MAPTGMR.Ex.PJ	(Karsten et al., 2006)
	es de la companya de		p-33AP58S.cRa.Scer\UAS	model of amyotrophic lateral sclerosis	is ameliorated by ssh <sup>NIG.6238R</sup>	(Deivasigamani et al., 2014)
				model of amyotrophic lateral sclerosis	is ameliorated by TorHMS00904	(Deivasigamani et al., 2014)
Ortholog Inform	ation					
D. melanogaster	r Gene Information (1)					
Synthetic Gene(	s) Used (0)					
Experimental Fir	ndinas					

# Search Human Disease Model Reports



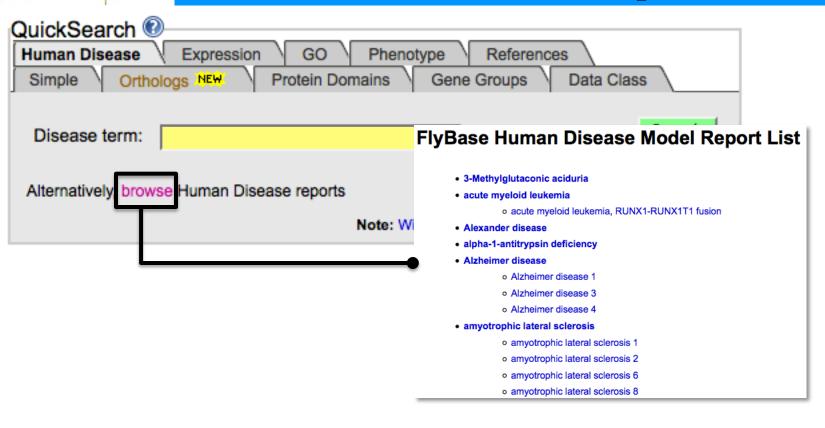
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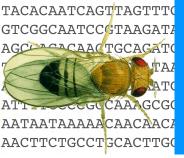
# Search Human Disease Model Reports



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# Search Human Disease Model Reports





## Human Disease Model Report

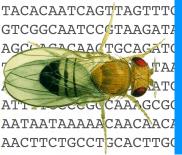
### Poster D1389B

Sian Gramates - Human Disease Model Reports in FlyBase. (Drosophila Models of Human Diseases)

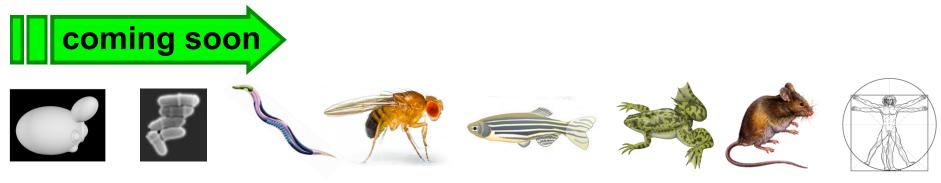
Thursday 2:30-3:30 PM

Friday 2:10-2:50 PM

Saturday 10:00-11:00 AM



## **Gene2Function**



### Ortholog Search

#### **Enter Gene Symbol or Disease name**

Q

Breast cancer, Parkinson's, ADH4, PARK2, ...

This site is brought to you by FlyBase & the DRSC

TACACAATCAGTTAGTTT( GTCGGCAATCCGTAAGATA AGC ACACAGATGCAGATG CCGC CAAAGCG AATAATAAAAACAACAAC AACTTCTGCCTGCACTTG(

## Gene2Function



Genes (105)

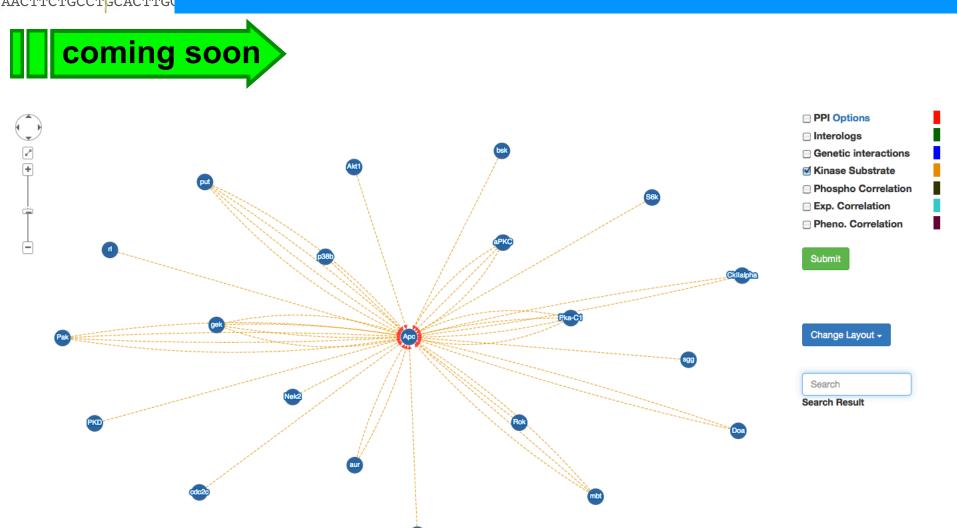
#### Filter by species

All

Symbol	Full Name	Organism	LinkOuts
apcdd1	adenomatosis polyposis coli down-regulated 1	Xenopus tropicalis	NCBI
APCS	amyloid P component, serum	Homo sapiens	NCBI
APCDD1L	adenomatosis polyposis coli down-regulated 1 like	Homo sapiens	NCBI
Apc	APC-like	Drosophila melanogaster	NCBI

TACACAATCAGTTAGTTT(
GTCGGCAATCCGTAAGATA
AGCACACACACTGCAGAT(
TAA
ATTACACGCAAAGCGC
AATAATAAAAAACAACAACA
AACTTCTGCCTGCACTTTGC

## **Gene2Function**



## **Community Resources**



#### Popular Resource Categories

All Resources	CRISPR	RNAi	Stocks	Model Organism Databases
Antibodies	Images	Neuroscience	Maps	Protocols ₽

#### All Resources

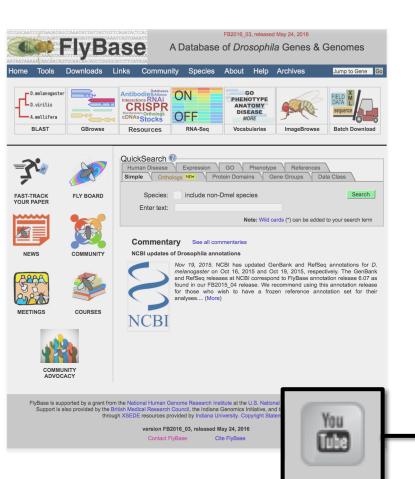
An extensive list of useful databases and reagent resources can be found on the pages linked below:

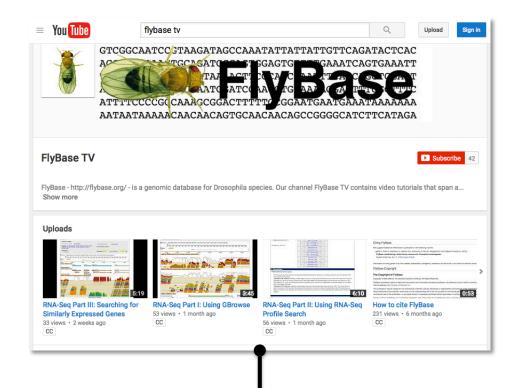
#### **Drosophila Network Resources**

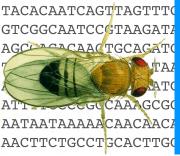
#### Includes:

- Atlases, Images, and Videos
- · CRISPRs and TALENs
- Data Repositories
- Data and Metadata for Drosophila Genomes
- Gene Expression Databases and Tools

### **Video Tutorials**







## **Gene Snapshots**

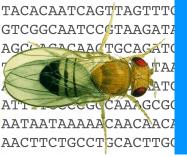


General Information					
Symbol	Dmel\ <b>Egfr</b>	Species	D. melanogaster		
Name	Epidermal growth factor receptor	Annotation symbol	CG10079		
Feature type	protein_coding_gene	FlyBase ID	FBgn0003731		
Gene Model Status	Current	Stock availability	53 publicly available		
Also known as	DER, top, flb, Elp, dEGFR, EGF-R, Elp-B1, top/DER, torpedo/egfr, Elp-1				
	Epidermal growth factor receptor (Egfr) is the transmembrane tyrosine kinase receptor for signalling ligands in the TGFalpha				
Gene Snapshot	family (Gurken, Spitz, Vein, and Keren), which utilises the intracellular MAP kinase pathway. Egfr roles include growth regulation, cell survival and developmental patterning. [Date last reviewed: 2016-05-20]				

### Submissions welcome!

https://flybase.wufoo.eu/forms/fb-gene-snapshot-form/

Pepe Urbano – jmu22@cam.ac.uk



## **Author Reagent Form**

**Data type** (mandatory) Duplicate rows as needed. Order is flexible, but row titles should be preserved.

gene (source not applicable)
strain, strain\_background
genetic reagent (in whole organism)
cell line
transfected construct (in cell line)
antibody
recombinant DNA reagent
sequence-based reagent
peptide, recombinant protein
large-scale dataset
commercial assay
chemical compound, drug
software, algorithm
other

Reagents can be clearly described by:
ID number
Source/Supplier
etc.

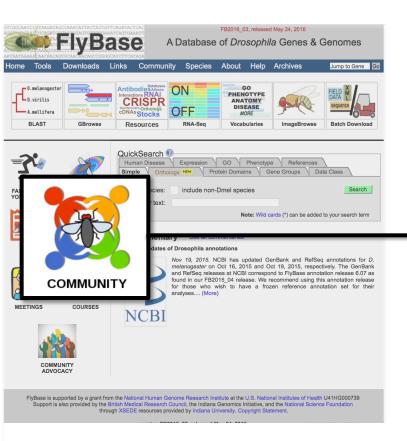
Fill it out as you go along.

Submit it in place of prose descriptions (as permitted by publisher).

Please provide feedback! (a work in progress)

Template and example available at: flybase.org/journal/reagent form/

# FlyBase in the Community



### Sign up!

- 1. Register
- 2. FlyBase Newsletter
- 3. FlyBase Community Advisory Group

### Poster (demo room)

Jose-Maria Urbano - FlyBase in the Community.