

LadybirdBase User Guide

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Content

- Introduction
- Usage



Introduction

LadybirdBase is a comprehensive database that compiles information on ladybird beetles mainly from published literature. The development and maintenance of LadybirdBase are supported by our team from Sun Yat-sen University, China.

Thanks to Miss Yue-Ning Jian for designing the logo of LadybirdBase.

For collaboration inquiries, please contact **Hao-Sen Li** at lihaosen3@mail.sysu.edu.cn. For technical support, please contact **Yi-Fei Sun** at sunyf28@mail2.sysu.edu.cn.

Usage

Search Ladybird Information

Taxonomy ▾

Search

Taxonomy

Diet

Distribution

Orthogroup

Examples for Searching:

Taxonomy: Enter the name of a ladybird species to find information on its taxonomy and biology. Example: *Cryptolaemus montrouzieri*;

Diet: Enter the name of a ladybird's prey or food source to find which ladybird species feed on it. Example: *Planococcus citri* or coccids;

Distribution: Enter the name of a location to find which ladybird species are distributed there. Example: Guangdong;

Orthogroup: Enter a gene or gene family name to find related gene family information. Example: cell wall hydrolase.



Main page

choose target term to search

Examples for Searching:

Taxonomy: Enter the name of a ladybird species to find information on its taxonomy and biology.

Example: *Cryptolaemus montrouzieri*;

Diet: Enter the name of a ladybird's prey or food source to find which ladybird species feed on it.

Example: *Planococcus citri* or coccids;

Distribution: Enter the name of a location to find which ladybird species are distributed there.

Example: Guangdong;

Orthogroup: Enter a gene or gene family name to find related gene family information. Example: cell wall hydrolase.



Usage

6872 ladybird species recorded in LadybirdBase

- Coccinellidae
 - Coccinellinae
 - + ABDHP-Aspidimerini
 - + ABDHP-Brachiacanthadini
 - + ABDHP-Diomini
 - + ABDHP-Hyperaspidiini
 - + ABDHP-Platynaspidiini
 - + Argemipilosini
 - + Azyini
 - + CSPS-Chilocorini
 - + CSPS-Plotinini
 - + CSPS-Sticholotidini
 - + CSPS-Sumniini
 - + Cephaloscymnini
 - + Chilocorini
 - + Chnoodini
 - + Coccidulini
 - + Coccinellini
 - + Cranophorini
 - + Cryptognathini
 - + Diomini
 - + Epilachnini
 - + Limnichopharini
 - + Noviini
 - + Ortallini
 - + Pentiliini
 - + Poriini
 - + Scymnillini
 - + **Scymnini**
 - + Shiroyuellini
 - + Stethorini
 - + Telsimiini
 - + Tetrabrachini
 - Microweiseinae
 - + Carinodulini
 - + Madeiroduilini
 - + Microweiseini
 - + Seranglii
 - Monocoryninae
 - + Monocorynini

click

- Coccinellidae
 - Coccinellinae
 - + Coccinellini
 - + ABDHP-Aspidimerini
 - Scymnini
 - + Pseudoscymnus
 - + Nephus
 - + Cyrena
 - + Veronicobius
 - + Leptoscyrmus
 - + Pseudaspiderus
 - + Zilius
 - + Axinoscyrmus
 - + Carinoscyrmus
 - + Scymnobius
 - + Acocidula
 - + Sasajiscymnus
 - Cryptolaemus
 - Cryptolaemus aeruginosus
 - Cryptolaemus affinis
 - Cryptolaemus ambiguus
 - Cryptolaemus asymmetricus
 - Cryptolaemus atratus
 - Cryptolaemus bicolor
 - Cryptolaemus concinnus
 - Cryptolaemus crochi
 - Cryptolaemus distinctus
 - Cryptolaemus dualis
 - Cryptolaemus dubius
 - Cryptolaemus fraternus
 - Cryptolaemus gressitti
 - Cryptolaemus guineensis
 - Cryptolaemus incertus
 - Cryptolaemus incrassatus
 - Cryptolaemus iodes
 - Cryptolaemus magnificus
 - Cryptolaemus metallicus
 - Cryptolaemus montrouzieri**
 - Cryptolaemus parvus
 - Cryptolaemus prominens
 - Cryptolaemus pulchellus
 - Cryptolaemus purpureus
 - Cryptolaemus regalis
 - Cryptolaemus riedeli
 - Cryptolaemus robustus
 - Cryptolaemus sedlaceki
 - Cryptolaemus sigmoidus
 - Cryptolaemus similis
 - Cryptolaemus simulatus
 - Cryptolaemus sinestria
 - Cryptolaemus splendens
 - Cryptolaemus splendidus
 - Cryptolaemus subviolaceus
 - Cryptolaemus teichodrom
 - Cryptolaemus trochanteratus
 - Cryptolaemus typicus
 - Cryptolaemus wallacii

display

Biology | Ecology | Genomics | Microbiomics | Lab test | Others | Tools

Cryptolaemus montrouzieri

Introduction

Cryptolaemus montrouzieri Mulsant (Coleoptera: Coccinellidae) is arguably one of the most widely used biological control agents. It has been introduced into many countries around the world. Both larvae and adults are voracious feeders, which prey on all stages of the mealybug hosts.

Picture

Taxonomy

Synonymous: *Cryptolaemus montrouzieri*

Combination: No record

Chinese name: 孟氏隐翅瓢虫

Food

Lab test

Genomics

Microbiomics

Reference ID	Title
Li et al., 2016a	Variation in life history traits and transcriptome associated with adaptation to diet shifts in the ladybird <i>Cryptolaemus montrouzieri</i>
Chen et al., 2018a	Physiological and evolutionary changes in a biological control agent during prey shifts over several generations
Li et al., 2021a	Genomic insight into diet adaptation in the biological control agent <i>Cryptolaemus montrouzieri</i>
Li et al., 2021b	Horizontally acquired antibacterial genes associated with adaptive radiation of ladybird beetles
Huang et al., 2025a	Molecular evolution of dietary shifts in ladybird beetles (Coleoptera: Coccinellidae): from fungivory to carnivory and herbivory
Zhang et al., 2015a	Transcriptome responses to heat- and cold-stress in ladybirds (<i>Cryptolaemus montrouzieri</i> Mulsant) analyzed by deep-sequencing

Biology page

click each term to display the details



LadybirdBase

Biology | Ecology | Genomics | Microbiomics | Lab test | Others | Tools

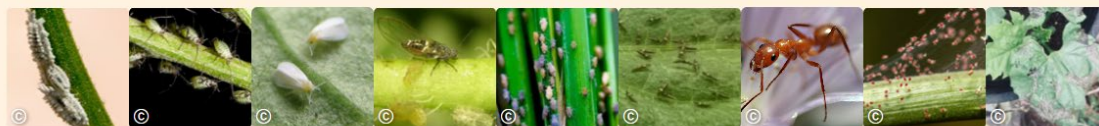
Usage

Diet

Diet Name: Search Ladybird Name: Search



Cryptolaemus montrouzieri *Coccinella septempunctata* *Novius pumilus* *Propylea japonica* *Harmonia axyridis*



coccids aphids whiteflies psyllids planthoppers thrips ants mites plant leaves



pollen others

Diet Name:	<input type="text" value="Icerya purchasi"/>	<input type="button" value="Search"/>	Ladybird Name:	<input type="text" value="Please input the name of predator"/>	<input type="button" value="Search"/>
Food Type	Food	Ladybird <input type="button" value="Hide"/>			
coccids	Icerya purchasi	Adalia bipunctata			
coccids	Icerya purchasi	Tetrabrachys kozlovi			
coccids	Icerya purchasi	Novius koebele			
coccids	Icerya purchasi	Novius rufopilosus			
coccids	Icerya purchasi	Tetrabrachys kozlovi			
coccids	Icerya purchasi	Novius pumilus			
coccids	Icerya purchasi	Novius cardinalis			
coccids	Icerya purchasi	Novius pumilus			
coccids	Icerya purchasi	Novius quadrimaculatus			
coccids	Icerya purchasi	Chilocorus bipustulatus			
coccids	Icerya purchasi	Cryptolaemus montrouzieri			

Diet Name:	<input type="text" value="Please input the name of prey"/>	<input type="button" value="Search"/>	Ladybird Name:	<input type="text" value="Cryptolaemus montrouzieri"/>	<input type="button" value="Search"/>
Food Type	Food	Ladybird <input type="button" value="Hide"/>			
coccids	Aspidiotus destructor	Cryptolaemus montrouzieri			
coccids	Planococcus citri	Cryptolaemus montrouzieri			
coccids	Maconellicoccus hirsutus	Cryptolaemus montrouzieri			
coccids	Pseudococcus sp	Cryptolaemus montrouzieri			
coccids	Dysmicoccus brevipes	Cryptolaemus montrouzieri			
coccids	Maconellicoccus hirsutus	Cryptolaemus montrouzieri			
coccids	Maconellicoccus hirsutus	Cryptolaemus montrouzieri			
coccids	Nipaecoccus nipae	Cryptolaemus montrouzieri			
coccids	Pulvinaria psidii	Cryptolaemus montrouzieri			
coccids	Maconellicoccus hirsutus	Cryptolaemus montrouzieri			
coccids	Nipaecoccus nipae	Cryptolaemus montrouzieri			
coccids	Maconellicoccus hirsutus	Cryptolaemus montrouzieri			

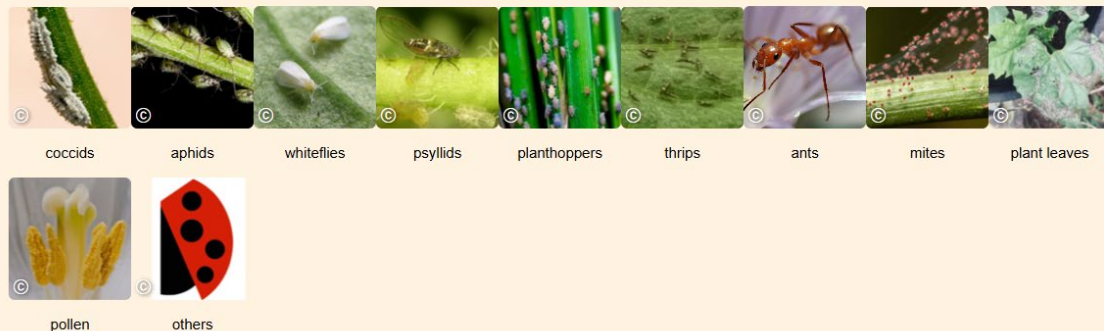
Usage

Diet

Diet Name: Search Ladybird Name: Search



click

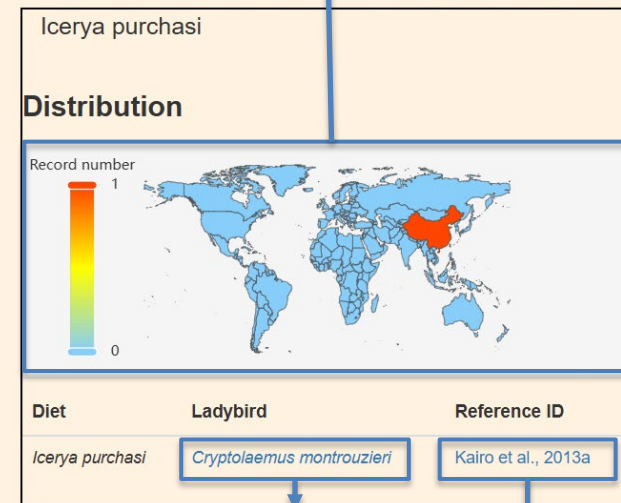


click can direct to biology page of this species

Cryptolaemus montrouzieri

- *Cryptolaemus montrouzieri*
- + Aleyrodidae
- + Diaspididae
- + Aphididae
- + Coccidae
- + Pseudococcidae
- Monophlebidae
- *Icerya purchasi*

Represent the country with record of specific predator feeding on specific prey



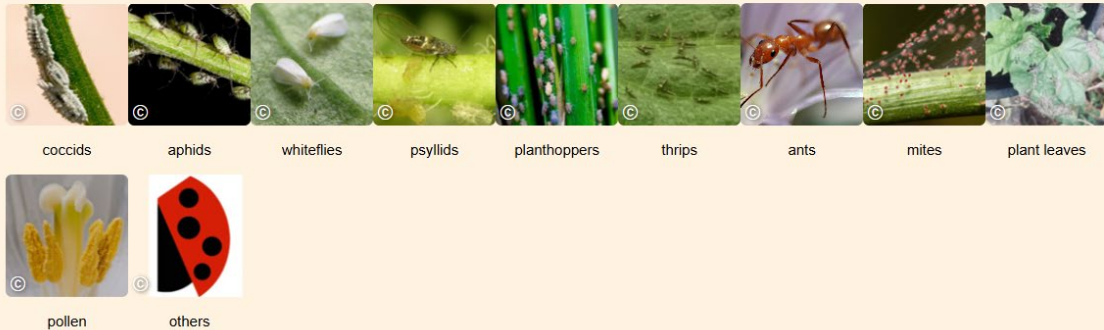
click can direct to biology page of this species

click can direct to reference page of this reference

Usage

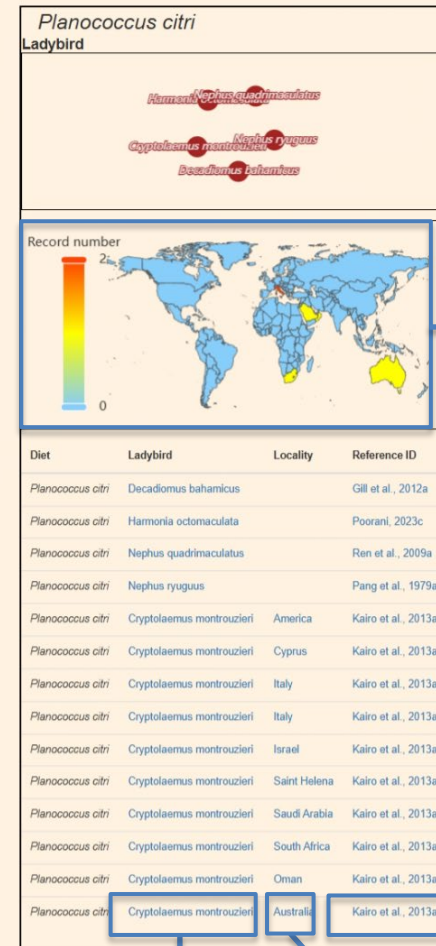
Diet

Diet Name: Search Ladybird Name: Search



click

- coccids
 - + Aleyrodidae
 - + Aphalaridae
 - + Asterolecaniidae
 - + Cerococcidae
 - + Coccidae
 - + Dactylopiidae
 - + Diaspididae
 - + Eriococcidae
 - + Margarodidae
 - + Matsucoccidae
 - + Monophlebidae
 - + Ortheziidae
- Pseudococcidae
 - Dysmicoccus boninensis
 - Dysmicoccus brevis
 - Dysmicoccus brevipes
 - Erium lichtensioides
 - Femisia virgata
 - Maconelliococcus hirsutus
 - Nipaeococcus aurilatus
 - Nipaeococcus filamentosus
 - Nipaeococcus nipae
 - Nipaeococcus viridis
 - Oracella acuta
 - Paracoccus marginatus
 - Phenacoccus graminicola
 - Phenacoccus manihoti
 - Planococcus citri**
 - Planococcus ficus
 - Planococcus kenyae
 - Planococcus krauthniae
 - Planococcus maritimus
 - Planococcus minor
 - Planococcus vitis
 - Pseudococcidae
 - Pseudococcus aulianatus
 - Pseudococcus citri
 - Pseudococcus crotonis
 - Pseudococcus longispinus
 - Pseudococcus ryani
 - Pseudococcus sequoiae
 - Pseudococcus sp
 - Rastrococcus iceryoides
 - Saccharicoccus sacchari
 - Trionymus insularis
- + Psyllidae



Represent the record number of with record of any predator preyed on specific prey

click can direct to biology page of this species

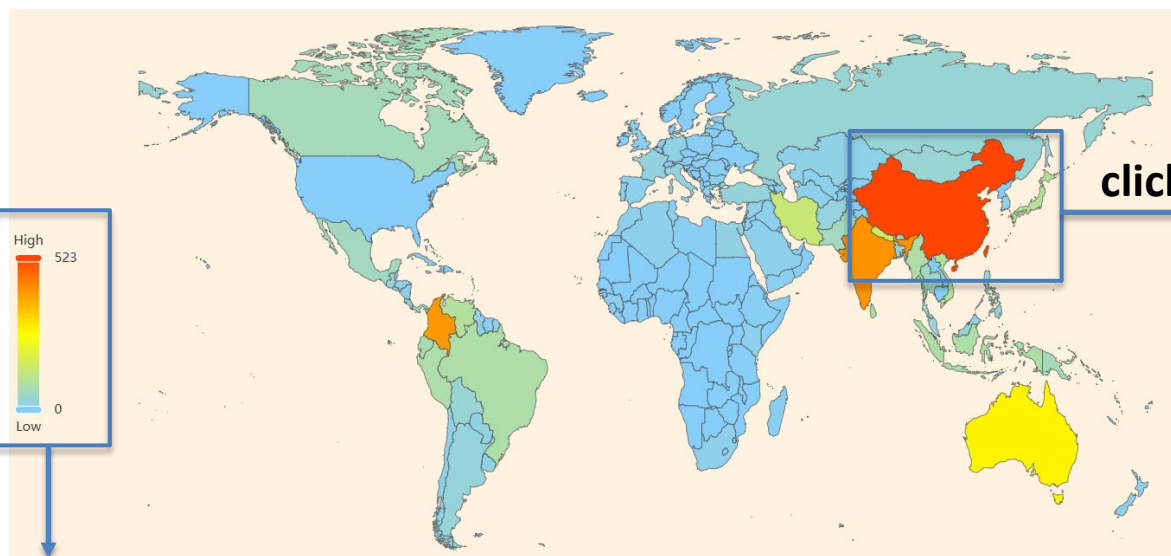
click can direct to distribution page of this country

click can direct to reference-page of this reference



Usage

Distribution



The taxonomy of species with distribution records in specific country

click

Coccinellidae in China

- Coccinellidae
 - Coccinellinae
 - + ABDHP-Aspidimerini
 - + ABDHP-Diomini
 - + ABDHP-Hyperaspidini
 - + ABDHP-Platynaspidini
 - + CSPS-Chilocorini
 - + CSPS-Plotinini
 - + CSPS-Sticholotidini
 - + CSPS-Sumniini
 - + Coccidulini
 - + Coccinellini
 - + Epilachnini
 - + Noviini
 - + Ortaliini
 - Scymnini
 - + Axinoscymnus
 - *Cryptolaemus*
 - Cryptolaemus montrouzieri*
 - + Nephus
 - + Pseudoscymnus
 - + Sasajiscymnus
 - + Scymnus
 - + Slipinskiscymnus
 - + Shirozuellini
 - + Stethorini
 - + Telsimiini
 - + Tetrabrachini
 - Microweiseinae
 - + Microweiseini
 - + Serangiini



Taxonomy

Synonymous: *Cryptolaemus montrouzieri*
Combination: No record
Chinese name: 孟氏隐唇瓢虫

Food



Lab test



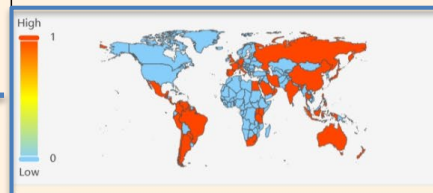
Genomics



Microbiomics



Distribution



The distribution of specific species

The number of predator with records in specific country



Usage

Whole genome

display the source of photo

Genome ID	Species	Genome Size (Mb)	Level	Chromosome	Scaffolds	GC Content	N50	Number of Genes	NCBI Accession
genome0001	<i>Henosepilachna vigintioctopunctata</i>	581.63	whole genome chromosome	10A+X	52	31.83	56.17	24404	PRJNA828333
genome0002	<i>Henosepilachna vigintioctopunctata</i>	496.12	contig		151	31.61	5.76	21898	JARQZJ000000
genome0003	<i>Cynegetis impunctata</i>	796	scaffold		5777	32	562.46Kb	32621	JARQZK000000
genome0004	<i>Propylaea japonica</i>	851.23	whole genome chromosome	9A+X	1074	35.12	100.34	39730	GCA_01342104
genome0005	<i>Harmonia axyridis</i>	425.54	whole genome chromosome	7A+X	14	35.14	63.68	18877	GCF_91476766
genome0007	<i>Adalia bipunctata</i>	475.29	whole genome chromosome	9A+XY	119	35.9	45.87	19636	GCA_91059233
genome0008	<i>Coccinella septempunctata</i>	398.87	whole genome chromosome	9A+X	25	36.42	41.44	18364	GCF_90716520
genome0009	<i>Micraspis discolor</i>	523.75	contig		2609	35.04	2.63	20056	JARTUT000000
genome0010	<i>Cryptolaemus montrouzieri</i>	988.13	whole genome chromosome	10A+X	206	34.88	101.22	24180	JABFTP000000
genome0011	<i>Novius pumilus</i>	182.42	contig		942	37.12	7.58	15772	GCA_02065415
genome0012	<i>Megalocaria dilatata</i>	772.3	whole genome chromosome	9A+X		34.23	72,475,326bp	25346	PRJNA1029341

display the source of photo

click can direct
to reference-
page of this
reference










Reference	Download
Zhu et al., 2023b	CDS; Protein
Huang et al., 2025a	CDS; Protein
Huang et al., 2025a	CDS; Protein
Zhang et al., 2020a	CDS; Protein




download



Usage

mitogenome





Genome ID	Species	Sequence method	Genome Size (Mb)	NCBI Accession	Reference
mitogenome0001	<i>Coccidula rufa</i>	linear	10589bp	JX412767	
mitogenome0002	<i>Cryptolaemus montrouzieri</i>	linear	17010bp	KT874575	Li et al., 2016b
mitogenome0003	<i>Novius quadrimaculatus</i>	linear	12660bp	MN053055	Song et al. 2020a
mitogenome0004	<i>Adalia bipunctata</i>	linear	18463bp	MW029465	Li et al., 2021d
mitogenome0005	<i>Aiolocaria hexaspilota</i>	circular	17549bp	MK583344	Seo et al., 2019a
mitogenome0006	<i>Anatis ocellata</i>	circular	17092bp	NC_036272	

click can direct to reference-
page of this reference



This page can choose to display by well-detected gene family or find all orthogroups based on KEGG annotations.

click can direct to the
description of specific term

Well-detected gene family

chemosensory

IR GR
SNMP
OBP

- OG0000120
- OG0000159
- OG0000308
- OG0000499
- OG0000609
- OG0001204
- OG0001329
- OG0001775
- OG0003446
- OG0003462
- OG0008518
- OG0008762
- OG0008973
- OG0009444
- OG0010007
- OG0012074
- OG0012636
- OG0016304
- OG0018304
- OG0023486

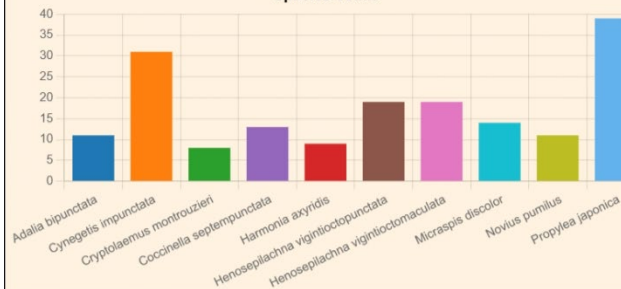
OG0000120

Annotation

PFAM: [PF01395](#):PBP/GOBP family,percent=89.65
Interpro: [IPR036723](#):Pheromone/general odorant binding protein
superfamily,percent=96.13;[IPR006170](#):Pheromone/general odorant binding protein,percent=90.64
KEGG KO: 0

Genome count

Species count



Download

↓ CDS

↓ Protein

download

Drop to choose species

Gene

Choose a species:

Cryptolaemus montrouzieri

CMONT_004924; CMONT_004928; CMONT_004920; CMONT_024345; CMONT_004926; CMONT_004913; CMONT_004377; CMONT_004919;

click

CMONT_004919;

PFAM: [PF01395](#):P/GOBP family,percent=89.65
InterPro: [IPR036728](#):Pheromone/general odorant binding protein superfamily,percent=96.13;[IPR006170](#):Pheromone/general odorant binding protein,percent=90.64
KEGG KO:

The table of differential expression of specific gene in different treatments

Expression

Download

Project	Group1	Group2	Change	Log2FoldChange
transssysu0002	CMFE01M	CMFE04A	stable	0.940557017749755
transssysu0002	CMFE02M	CMFE03A	stable	0.063985548419821
transssysu0002	CMFE01A	CMFE03M	stable	1.27451737241413
transssysu0002	CMFE01A	CMFE01M	stable	0.080180663951817

Variance

Download

Project	Variance ID	Ref Site
project1	project1_snp5937348	T
project1	project1_snp5937349	T
project1	project1_snp5937350	G
project1	project1_snp5937351	A
project1	project1_snp5937352	G

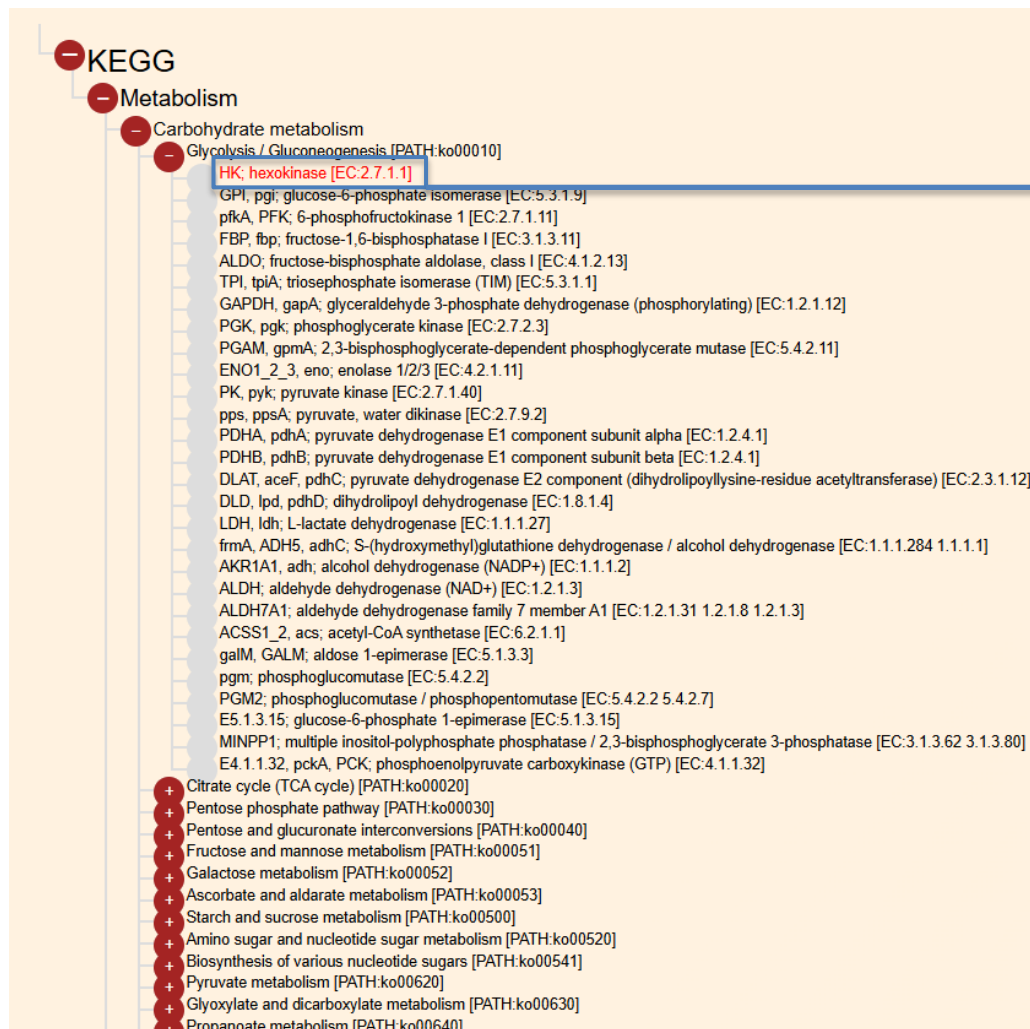
The table of
variances of different
treatments on
specific gene



Usage

Orthogroup This page can choose to display by well-detected gene family or find all orthogroups based on KEGG annotations.

KEGG pathway




- OG0000478
- OG0021482

The other are the same with previous described.

Usage

Variance



Click and display information below

Treat ID	Location	Data type	Number
BQ	Australia (Brisban, Queensland)	resequence	5
BS	China (Yunnan, Baoshan)	resequence	11
CB	Australia (Canberra)	resequence	10
CMFEAPH-F1	China (Guangzhou, Sun Yat-sen University)	resequence	10
CMFEAPH-F10	China (Guangzhou, Sun Yat-sen University)	resequence	10
CMFEAPH-F2	China (Guangzhou, Sun Yat-sen University)	resequence	10
CMFEAPH-F20	China (Guangzhou, Sun Yat-sen University)	resequence	10
CMFEMEA-F1	China (Guangzhou, Sun Yat-sen University)	resequence	10
HD	China (Guangdong, Guangzhou)	resequence	10
HP	China (Guangdong, Guangzhou)	resequence	5
MM	China (Guangdong, Maoming)	resequence	8
SA	China (Guangdong, Guangzhou)	resequence	9
SZ	China (Guangdong, Shenzhen)	resequence	10

Site Selection

Type (must):

Scaffold:

Position:

Mutation Type:

Selection:

Treat ID	REF/REF	REF/ALT	ALT/ALT	.
F10A	3	5	0	1
F1A	6	4	0	0
F1M	8	2	0	0
F20A	6	3	0	0
F2A	7	2	1	0

Site Selection

Type (must):

Scaffold:

Position:

Mutation Type:

choose the criteria for selecting sites.

Site ID	Position	REF	ALT	Type	Influence
project1_snp17450129	scaffold_1:3165	T	G	intergenic_region	MODIFIER
project1_snp17450130	scaffold_1:3188	T	C	intergenic_region	MODIFIER
project1_snp17450131	scaffold_1:3237	G	T	intergenic_region	MODIFIER
project1_snp17450132	scaffold_1:3274	C	T	intergenic_region	MODIFIER
project1_snp17450133	scaffold_1:3275	A	T	intergenic_region	MODIFIER
project1_snp17450134	scaffold_1:3342	A	G	intergenic_region	MODIFIER
project1_snp17450135	scaffold_1:3345	T	C	intergenic_region	MODIFIER

Treat ID	REF/REF	REF/ALT	ALT/ALT	.
F10A	3	5	0	1
F1A	6	4	0	0
F1M	8	2	0	0
F20A	6	3	0	0
F2A	7	2	1	0

click to display the detailed information of specific site.



LadybirdBase

Biology | Ecology | Genomics | **Microbiomics** | Lab test | Others | Tools

Usage

16S rRNA

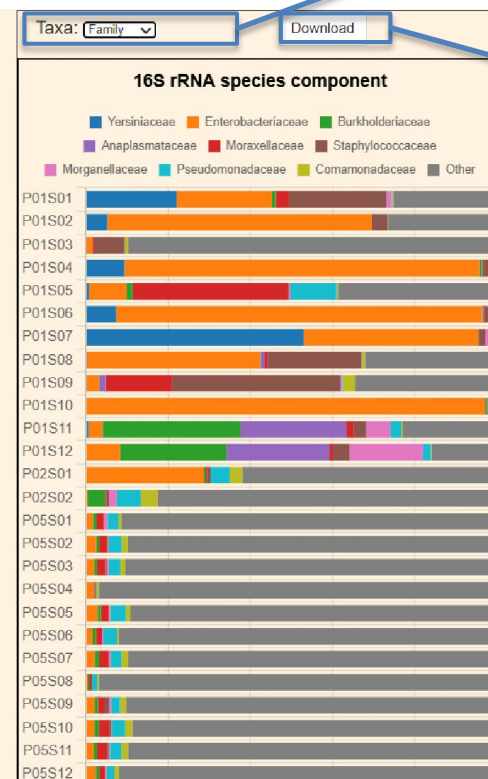
The number of microbiome of ladybird: **970** (2025-08-27)

Anisolemnia dilatata *Cheliomenes sexmaculata* *Chilocorus bijugus* *Coccinella septempunctata* *Coelophora biplagiata* *Coelophora saucia* *Cryptolaemus montrouzieri* *Delphastus catalinae* *Harmonia axyridis*
Harmonia dimidiata *Henosepilachna ulmi* *Illeis koebelei* *Illeis shensiensis* *Micraspis discolor* *Novius pumilus* *Platynaspis maculosa* *Propylea japonica*

choose the level of taxonomy to display

click

Project	Location	Stage	Tissue	Diet
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	adult	3 whole individuals	Megoura viciae
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	adult	3 whole individuals	Megoura viciae
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	adult	3 whole individuals	Megoura viciae
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	adult	3 whole individuals	Planococcus citri
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	adult	3 whole individuals	Planococcus citri
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	adult	3 whole individuals	Planococcus citri
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Megoura viciae
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Megoura viciae
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Megoura viciae
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Planococcus citri
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Planococcus citri
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Planococcus citri
16ssysu0001	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	multiple whole individuals	Planococcus citri
16ssysu0002	China (Guangzhou, Sun Yat-sen University)	guts from 10 individuals		Planococcus citri
16ssysu0002	China (Guangzhou, Sun Yat-sen University)	2-4th-instar larva	guts from 10 individuals	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri
16ssysu0005	China (Guangzhou, Sun Yat-sen University)	4th-instar larva	single whole individual	Planococcus citri



download the data of specific level of taxonomy

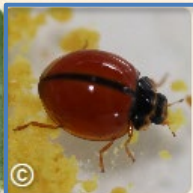


Usage

ITS

Biology | Ecology | Genomics | **Microbiomics** | Lab test | Others | Tools

The number of ITS of ladybird: **65** (2025-08-27)



Harmonia axyridis

*Henosepilachna
vigintioctopunctata*

Micraspis discolor

click

[illegible]



Usage

metagenome

The number of metagenome of ladybird: **10** (2025-08-27)

Project	Speices	Sample	Experiment design	Reference
metasysu0001	Henosepilachna vigintioctopunctata	China (Guangzhou, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0002	Micraspis discolor	China (Guangzhou, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0003	Coccinella septempunctata	China (Guangzhou, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0004	Cryptolaemus montrouzieri	China (Guangzhou, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0005	Henosepilachna vigintioctopunctata	China (Shenzhen, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0006	Coccinella septempunctata	China (Shenzhen, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0007	Cryptolaemus montrouzieri	China (Shenzhen, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0008	Henosepilachna vigintioctopunctata	China (Jiangsu, Suqian)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0009	Coccinella septempunctata	China (Henan, Nanyang)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	
metasysu0010	Micraspis discolor	China (Shenzhen, Sun Yat-sen University)	metagenomic sequencing of guts from multiple 4th-instar larval individuals	

Usage

Diet range

This page can choose to display the diet ranges of single predator or the recorded predator of single prey or whether there are records of a predator preyed on a prey.

Method 1



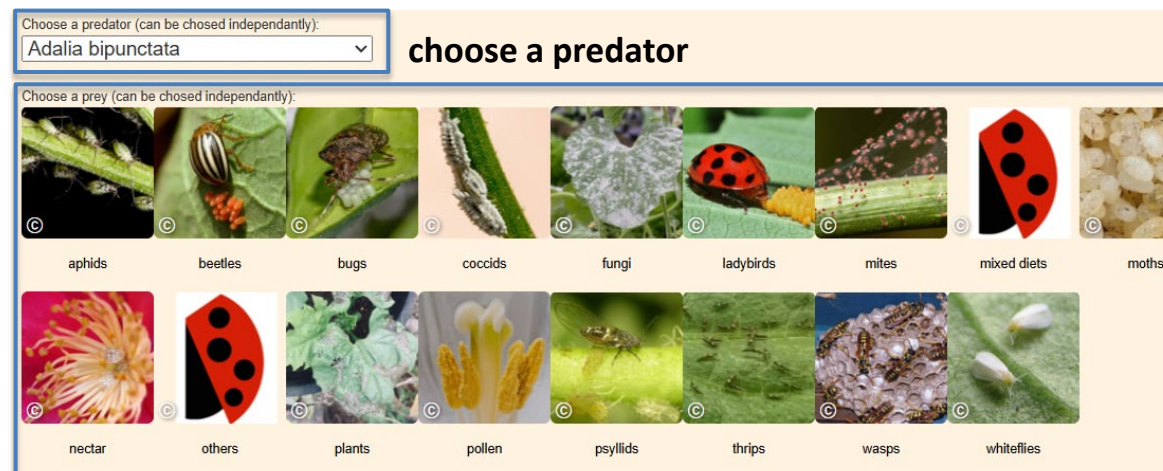
click

Search Clear

Species	Diet	Diet Family	Diet common name	Feed
<i>Cryptolaemus montrouzieri</i>	<i>Megoura japonica</i>	Aphididae	aphids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Megoura japonica</i>	Aphididae	aphids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Myzus persicae</i>	Aphididae	aphids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Nezara viridula</i> eggs	Pentatomidae	bugs	yes
<i>Cryptolaemus montrouzieri</i>	<i>Dymicoccus neobrevipes</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Paracoccus marginalis</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Planococcus citri</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Planococcus citri</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Planococcus citri</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Planococcus citri</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Planococcus citri</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Planococcus minor</i>	Pseudococcidae	coccids	yes
<i>Cryptolaemus montrouzieri</i>	<i>Adalia bipunctata</i> eggs	Coccinellidae	ladybirds	yes

Search the tested records of some commonly used biological agents.

Method 2



Adalia bipunctata

aphids

Search Clear

click can clear all chosen options

Species	Diet	Diet Family	Diet common name	Feed	Development	Reproduction	Rearing lab	Reference
<i>Adalia bipunctata</i>	<i>Acyrtosiphon pisum</i>	Aphididae	aphids	yes	yes	yes	Belgium (Ghent University)	Bonte et al., 2010a
<i>Adalia bipunctata</i>	<i>Acyrtosiphon pisum</i>	Aphididae	aphids	yes	yes	yes	Belgium (Ghent University)	De Clercq et al., 2005a
<i>Adalia bipunctata</i>	<i>Aphis gossypii</i>	Aphididae	aphids	yes	yes	na	China (Qinghai University)	Wei et al., 2024a

click can direct to biology page of this species

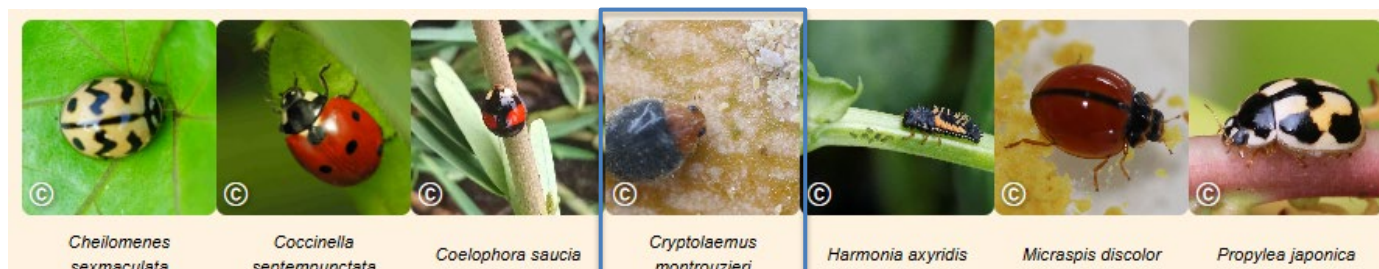
click can direct to biology page of this species

click can direct to reference page of this reference



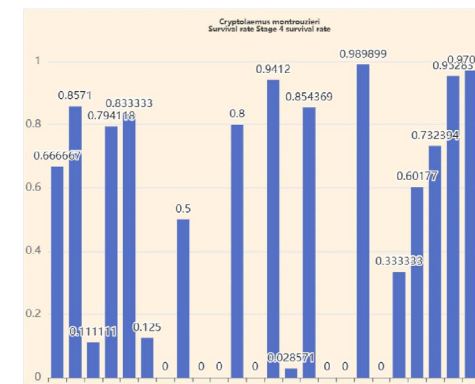
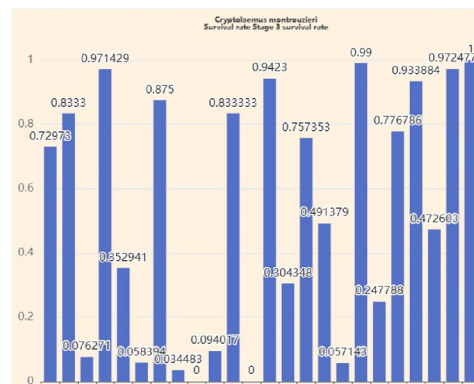
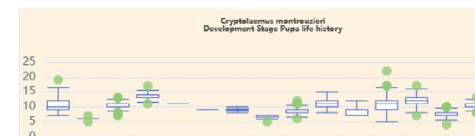
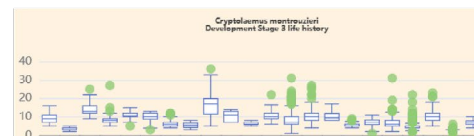
Usage

Life history



click

Treatment ID	Institute	Note	No_individuals	Note	Reference
20191104CMONT_WHITEFLY	China (Guangzhou, Sun Yat-sen University)		105		Li et al., 2021a
20170101CMONT_BRINESHRIMP	China (Guangzhou, Sun Yat-sen University)		112		Li et al., 2021a
20170101CMONT_MEALYWORM	China (Guangzhou, Sun Yat-sen University)		100		Li et al., 2021a
20170101CMONT_POLLEN	China (Guangzhou, Sun Yat-sen University)		74		Li et al., 2021a
20170101CMONT_BEEFMEAT	China (Guangzhou, Sun Yat-sen University)		116		Li et al., 2021a
20170101CMONT_PORKLIVER	China (Guangzhou, Sun Yat-sen University)		105		Li et al., 2021a
20150101CMONT_APHID	China (Guangzhou, Sun Yat-sen University)		118		Li et al., 2021a
20170101CMONT_APHIDMEDIUMF2	China (Guangzhou, Sun Yat-sen University)		48		Li et al., 2016a



click can direct to reference
page of this reference



Usage

Stress tolerance



click

Tested species	Pesticide	Pesticide (Chinese name)	Locality	Treatment	Survival rate	Developme	Egg hatchability	Reference
Coccinella septempunctata	Afidopyropen	双丙环虫酯	China (China Agricultural University)					Liu et al., 2024c
Coccinella septempunctata	Chlorantraniliprole	溴氢虫酰胺	Shenyang University of Technology		na		na	Cong et al., 2023a
Coccinella septempunctata	Tetrachlorantraniliprole		Shenyang University of Technology		na		na	Cong et al., 2023a
Coccinella septempunctata	Broflanilid	溴虫氟苯溴酰胺	Shenyang University of Technology		na	negative		Cong et al., 2023a
Coccinella septempunctata	Chlorantraniliprole	氯虫苯甲酰胺	Shandong Agricultural University		negative			Jiang et al., 2020b
Coccinella septempunctata	Cyantraniliprole	溴氢虫酰胺	Shandong Agricultural University			negative		Jiang et al., 2020b
Coccinella septempunctata	Cycloxaprid	环氧虫啉	Chinese Academy of Agricultural Sciences		negative	negative	negative	Wu et al., 2022g
Coccinella septempunctata	Thiamethoxam	噻虫嗪	Hebei Agriculture University	inject to abdomn	na	na	na	Cheng et al., 2022a
Coccinella septempunctata	Acetamiprid	啉虫脒	Fujian Key Laboratory for Monitoring and Integrated Management of Crop Pests		na	negative	na	You et al., 2022a

click can direct to reference
page of this reference



Usage

Reference (Guest)

Reference Find

Title

Or

Citation formation

⌵Hide

Year: -

Author:

Species:



Keywords:



Search

Clear

click can search based on
the criteria

click can clear all set criteria

Examples for Searching:

Title: Enter the name of the tile to find the reference.

Example: Horizontally acquired antibacterial genes associated with adaptive radiation of ladybird beetles;

Citation formation: Enter the citation formation for searching;

Example: Li et al., 2021;

Year: Enter the year range for search.

Example:2021/2021-2025;

Author: Enter the name of author to find related works.

Example: Li Hao-sen (this way is under developopting, which will not hit more results without such accuracy).



Usage

Links

provide the links of some widely used websites

Site Type	Site Name	URL	Description
ladybird-related database	Coccinellidae de Chile	http://www.coccinellidae.cl/	ladybirds in Chile
ladybird-related database	Brisbane Ladybirds	http://www.brisbaneinsects.com/brisbane_ladybirds/	ladybirds in Brisbane, Australia
ladybird-related database	Nicky Bay's Marco Photography	https://www.nickybay.com/coccinellidae-checklist-ladybird-beetles/	ladybird photos taken by Nicky Bay from Singapore
ladybird-related database	Ladybug Planet	https://ladybugplanet.com/	ladybird website created by Pamela Anne
ladybird-related database	The Lost Ladybug Project	http://www.lostladybug.org/index.php	a project of ladybird survey in North America
ladybird-related database	ScaleNet	http://scalenet.info/	comprehensive information of scales, one of the main prey of ladybirds
ladybird-related database	PhylAphidB@se	https://aphidb.supagro.inrae.fr/	comprehensive information of aphids, one of the main prey of ladybirds
ladybird-related database	Wikispecies	https://species.wikimedia.org/wiki/Main_Page	species information including ladybirds



Usage

morphology

Basic Information

Food:

Locality:

Adult morphology

Body length: mm - mm

Body width: mm - mm

Head Color:

☐ black ☐ white ☐ yellow ☒ red ☐ brown ☐ orange

Elytra Color:

☐ yellow ☐ black ☐ orange ☐ red ☐ brown ☐ white ☐ blue

With hair :

Result

<i>Chilocorus bipustulatus</i>	<i>Chilocorus kuwanae</i>	<i>Chilocorus politus</i>	<i>Chilocorus rubidus</i>	<i>Chilocorus rufitarsis</i>	<i>Cryptolaemus montrouzieri</i>	<i>Exochomus quadripustulatus</i>	<i>Harmonia eucharis</i>
<i>Novius cardinalis</i>	<i>Novius pumilus</i>	<i>Novius quadrimaculatus</i>	<i>Novius rufopilosus</i>	<i>Scymnus sodalis</i>	<i>Serangium japonicum</i>	<i>Sumnius cardoni</i>	<i>Tetrabrachys kozlovi</i>

click can direct
to biology page
of this species



Usage

Barcode

Job name

Seq fasta

```
CTTAGGTCTACTGAAAGATTAATTGGAAAT
GACCAAATTTATAATGTTATTGTTACAGCTC
ATGCTTTTA
TTATAATTTTTTTTATAGTTATACCTATTATAA
TTGGGGGATTGGAAATTGATTAGTTCCCC
```

Or upload the file 未选择文件

Choose Your Barcode type[?]

☒ mt-COI ☐ mt-COII ☐ mt-ND2 ☐ mt-CytB
☐ 12S rRNA ☐ 16S rRNA

Choose Database[?]

☐ All ☒ Accurate

Threshold for judge

click can direct to biology
page of this species

The threshold of identity for detection: 0.97

Potential species: [Micraspis discolor](#);

Query_id	Subject_id	Target species	Identity	Alignment_length	Mismatches	Gap_openings	q_start	q_end	s_start	s_end
KF022225	KF022225	<i>Micraspis discolor</i>	100	498	0	0	4	501	1	498



Usage

Barcode

Blast

Query fasta

Job name

CMONT_001

Seq fasta

ANVSDTTSRVHAFCGNLSMRAPNVKCYPEPNALNPCEDIMGYSWLRISVWFVVLTVVGNL
AVIIVVIFS
GGDLTVTRFLICNLAIADLSMGLYLLLI AFMDLHSVGSYFNFAYDWQYGTSRVDFRNRMQIG
RFPHRFRK
SSISYLNSSHNRTLVCNHLRYLFNQKDSNRHSYEDDDIRVALFYCDRRFAFDGCE

Or upload the file

选择文件

未选择文件

Choose a BLAST algorithm

blastp

Databases

Ladybird protein database

Threshold for judge

0.01

Max target sequences

50

Start

click can direct to the gene page of specific gene

Query_id	Subject_id	Identity	Alignment_length	Mismatches	Gap_openings	q_start	q_end	s_start	s_end	e_value	bit_score
CMONT_001	CMONT_000001-T2	100	616	0	0	1	616	1	616	0	1287
CMONT_001	CMONT_000001-T1	100	539	0	0	1	539	1	539	0	1127
CMONT_001	ABIPU_006696-T1	68	547	165	2	1	539	1	547	0	795
CMONT_001	HAXYR_v2_03175-T1	69	533	161	2	10	539	1	532	0	771
CMONT_001	CSEPT_v2_04480-T1	70	502	144	1	41	539	29	530	0	767
CMONT_001	MDISC_003721-T1	67	538	169	4	2	539	1	531	0	755



LadybirdBase

Biology | Ecology | Genomics | Microbiomics | Lab test | Others | **Tools**

Usage

Expression



choose a species and the type of treatments (optional) to display the information of transcriptome

stage-specific test tissue-specific test **food stress test** bacterial injection stress test Other

Project: -- Select a project --

Transcript:

SRA Reference

Group 1: CMFEAPH Group 2: CMLAAPH ☒ Gene ☐ Isoform Log2FoldChange: 1 P-value: 0.05

Change: up Function: Chemosensory

Gene ID	Change	log2FoldChange	p-adjust	Orthogroup	Function	CMFEAPH1	CMFEAPH2	CMFEMEA1	CMFEMEA2	CMLAAPH1	CMLAAPH2	CMLAAPH3
CMONT_000001	down	-1.41294414863335	0.0001389253196756	OG0001460	LSHR	8.725599	11.75586	8.78606	5.282698	9.741647	14.11679	10.58
CMONT_000004	down	-1.87796052269135	3.48439448037545e-05	OG0000189	P450	253.5847	355.0433	240.4906	181.3702	608.3659	350.0519	267.6
CMONT_000006	down	-1.27042434472052	9.03880507294434e-06	OG0001981	unknown	143.475	172.3088	70.92413	89.9108	160.3026	168.9949	122.7
CMONT_000013	down	-3.77249679147507	1.1153933413975201e-15	OG0000065	CAT	178.0169	106.5845	45.93087	56.66036	1076.556	574.8329	143.5
CMONT_000014	down	-3.73900724773115	3.8011399648012e-19	OG0000065	CAT	413.2458	262.2265	206.6795	204.1214	2372.603	1467.914	1299

choose to display the result

click

click can direct to specific orthogroup



Usage

Primer

Species:

Primer ID	Species/groups	Target region	Tm	Reference	Sequence
primer000001	bacteria	16S rRNA?v3-v4	52		
primer000002	Bacteria, Soil	16S rRNA v4	63.6/51.2	Francioli et al., 2021a	
primer000003	universe primer for Coccinellidae DNA marker	18S rRNA		Szawaryn et al., 2015a	
primer000004	Coccinellidae	18S rRNA		na	
primer000005	universe primer for Coccinellidae DNA marker	18S rRNA		Szawaryn et al., 2015a	
primer000006	universe primer for Coccinellidae DNA marker	18S rRNA		Szawaryn et al., 2015a	
primer000007	universe primer for Coccinellidae DNA marker	18S rRNA		Szawaryn et al., 2015a	
primer000008	Coccinellidae	28S rRNA		Szawaryn et al., 2015a	
primer000009	Medicinal Plant Species	ITS2	56	Chen et al., 2010a	
primer000010	fungi, Coccinellidae	ITS2		White et al., 1990a	

primer000001

Forward: ACTCCTACGGGAGGCAGCA
Reverse: GGACTACHVGGGTWTCTAAT

click

click can direct to reference-
page of this reference



THANK YOU!