

Dear all,

Full ORF Gateway-compatible clones and KH transcript models are now accessible from the Aniseed website, in addition to their representation in the Aniseed Genome browser.

The following instructions will help you to find information concerning Gateway-compatible clones and KH transcript models. Don't hesitate to send us feedback or comments, especially if you find some bugs or inconsistencies.

Information available in Aniseed:

Full ORF gateway-compatible clones (Rothbacher et al., in preparation)

- Library clone name (e.g. cima810896 ; cien56376)
- JGI/Gilchrist clone name (e.g. CBWU10896 ; XABT56376)
- Plate position (e.g. VES58_F02)
- Genbank entry (e.g. FF864681)
- Sequence
- Library/Origin
- Vector

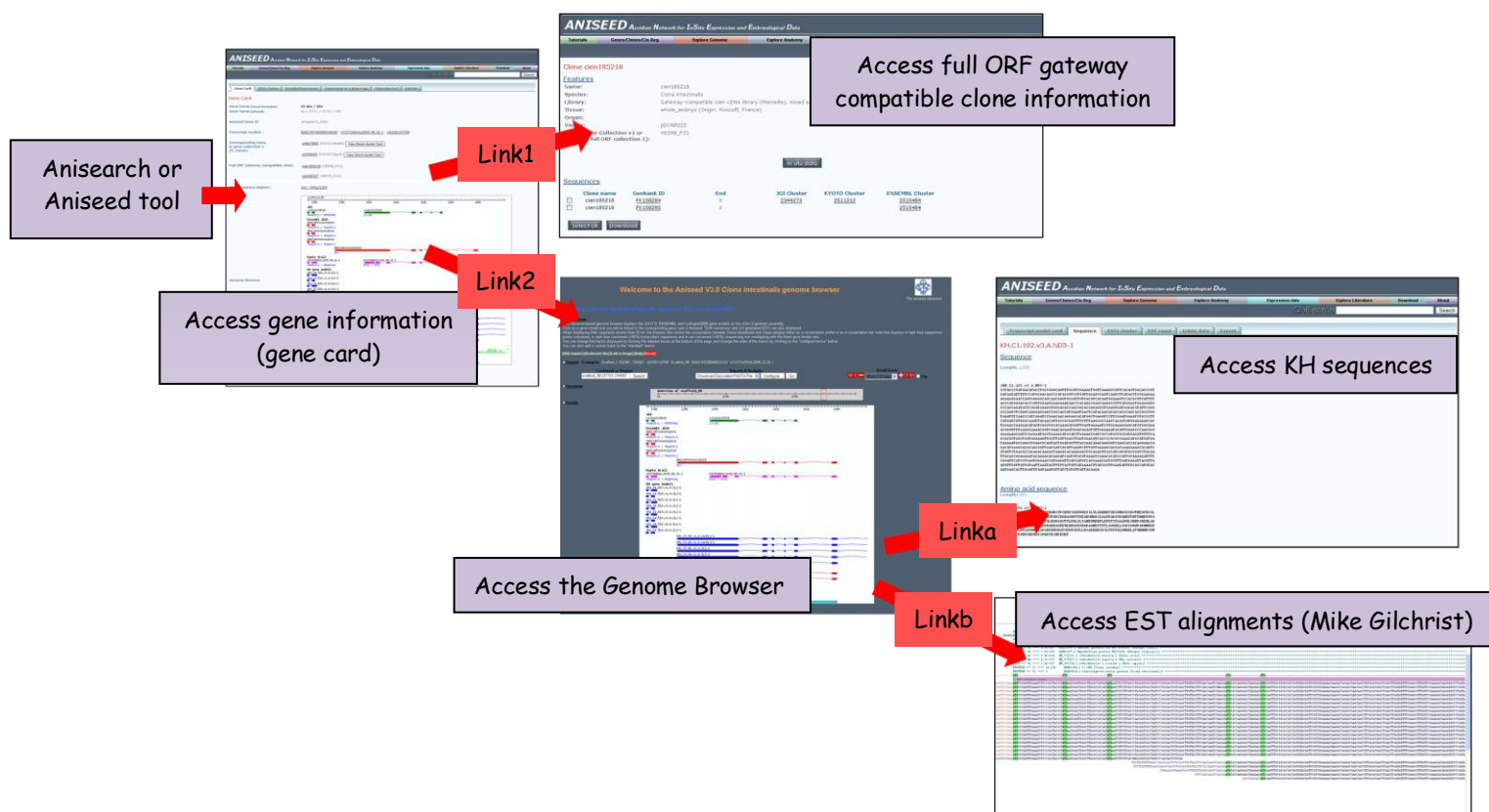
KH transcript models (Satou et al., 2008)

- DNA sequence
- Amino acid sequence

How to access this information?

Access this information in Aniseed (<http://crfb.univ-mrs.fr/aniseed/>)

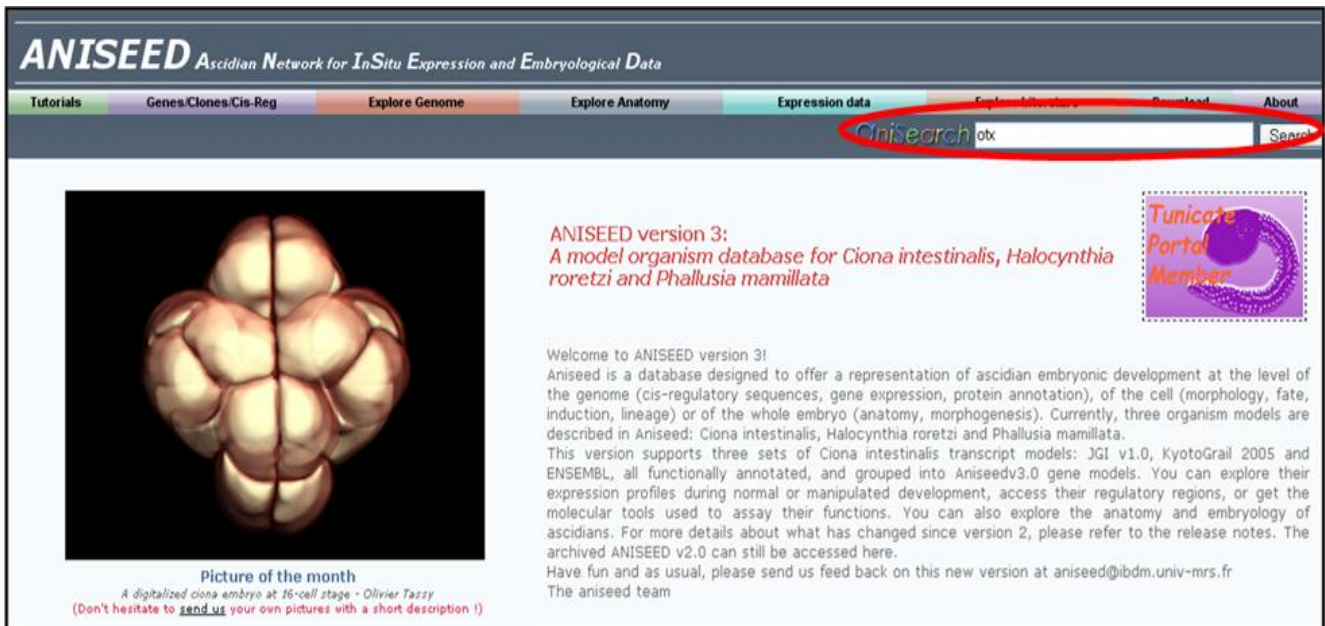
Schematic overview:



Access gene information (gene card)

You can access gene features (gene card) using AniSearch or using the menu "Genes/Clones/Cis-reg menu".

- Using AniSearch:



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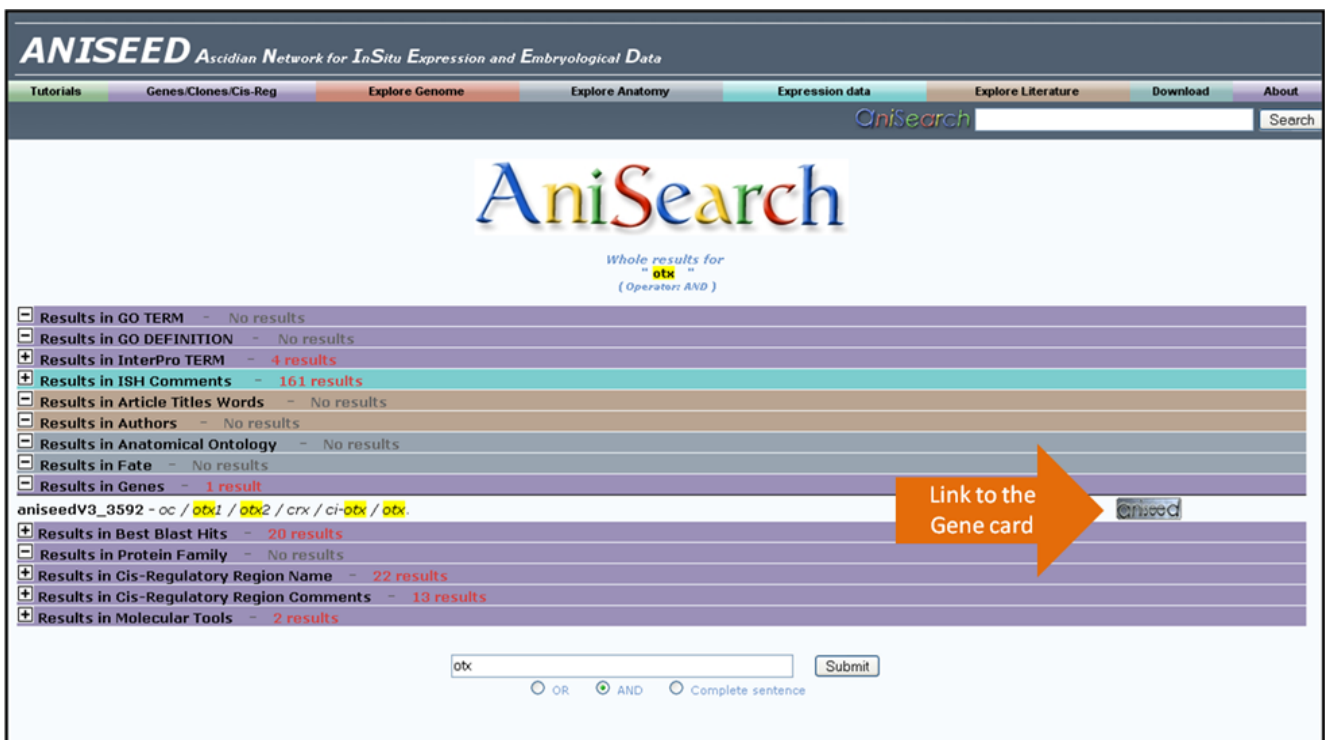
AniSearch otx Search

Picture of the month
A digitalized ciona embryo at 16-cell stage - Olivier Tassy
(Don't hesitate to send us your own pictures with a short description !)

ANISEED version 3:
A model organism database for Ciona intestinalis, Halocynthia roretzi and Phallusia mamillata

Welcome to ANISEED version 3!
Aniseed is a database designed to offer a representation of ascidian embryonic development at the level of the genome (cis-regulatory sequences, gene expression, protein annotation), of the cell (morphology, fate, induction, lineage) or of the whole embryo (anatomy, morphogenesis). Currently, three organism models are described in Aniseed: Ciona intestinalis, Halocynthia roretzi and Phallusia mamillata. This version supports three sets of Ciona intestinalis transcript models: JGI v1.0, KyotoGrail 2005 and ENSEMBL, all functionally annotated, and grouped into Aniseedv3.0 gene models. You can explore their expression profiles during normal or manipulated development, access their regulatory regions, or get the molecular tools used to assay their functions. You can also explore the anatomy and embryology of ascidians. For more details about what has changed since version 2, please refer to the release notes. The archived ANISEED v2.0 can still be accessed here.
Have fun and as usual, please send us feed back on this new version at aniseed@ibdm.univ-mrs.fr
The aniseed team

Tunicate Portal Member



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AniSearch Search

AniSearch
Whole results for "otx"
(Operator: AND)

- Results in GO TERM - No results
- Results in GO DEFINITION - No results
- Results in InterPro TERM - 4 results
- Results in ISH Comments - 161 results
- Results in Article Titles Words - No results
- Results in Authors - No results
- Results in Anatomical Ontology - No results
- Results in Fate - No results
- Results in Genes - 1 result

aniseedV3_3592 - oc / otx1 / otx2 / crx / ci-otx / otx.

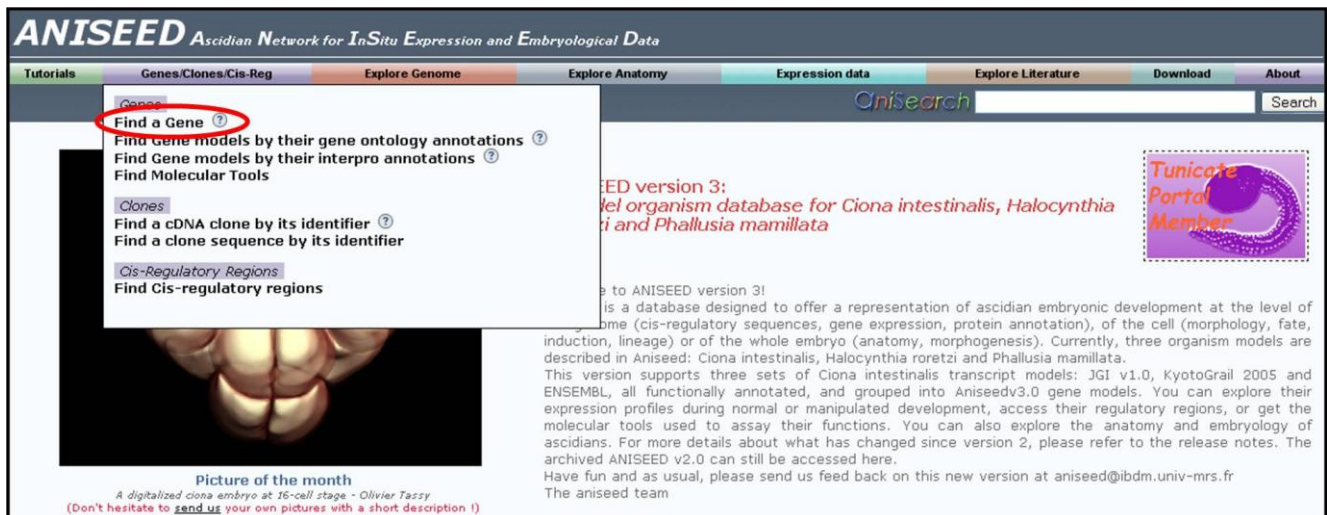
- Results in Best Blast Hits - 20 results
- Results in Protein Family - No results
- Results in Cis-Regulatory Region Name - 22 results
- Results in Cis-Regulatory Region Comments - 13 results
- Results in Molecular Tools - 2 results

otx Submit

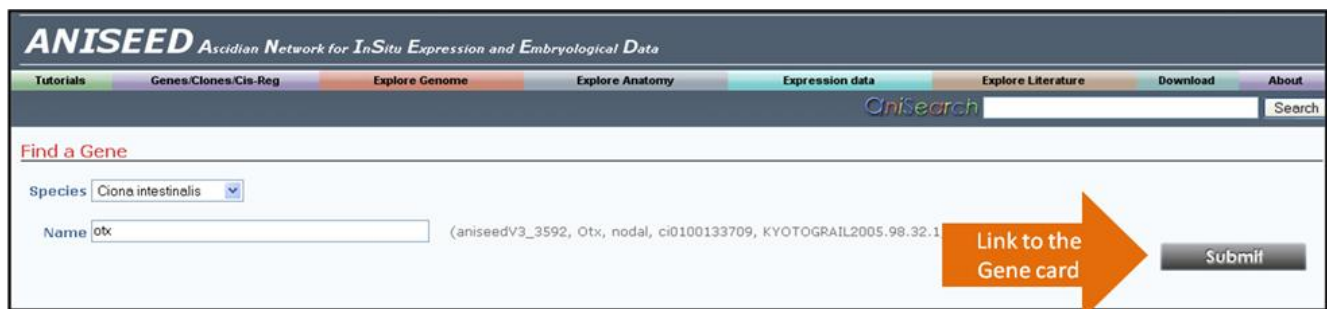
OR AND Complete sentence

Link to the Gene card

- Using the Genes/Clones/Cis-reg menu, select the "Find a gene" link:



- o Choose an "Ascidian species" from the menu by clicking on the arrows and scrolling down.
- o Enter the biological name (otx) or the identifier of the gene model (ENSEMBL, JGI v1.0, KYOTOGRAIL2005, KH) you are looking for and click on the "Submit" button to access the gene card.



The gene card gives access to functional annotation of the gene (name, ortholog in mouse, human and Drosophila, interpro domains and Gene Ontology classification), corresponding transcript models, clones and regulatory regions and to an overview of the Genome browser. Thus, you can access from the gene card to corresponding full ORF gateway-compatible clone information and to the Genome browser:

Otx Gene card

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CniSearch Search

Gene Card | ESTs cluster | Detailed Expression | Expression at a glance *New* | Molecular tool | Articles

Gene Card

Gene Name (Manual Annotation): Ci-otx / Otx
Gene Name (Inferred): oc / OTX1 / OTX2 / CRX

Aniseed Gene id: aniseedV3_3592

Transcript models : ENSICNT00000018028 , KYOTOGRAIL2005.98.32.1 , ci0100133709

Corresponding clone in gene collection 1 (N. Satoh)
[citb070007](#) (R1CIGC46a06) [View Ghost cluster Card](#)
[ci0145e03](#) (R1CIGC13g19) [View Ghost cluster Card](#)

Full ORF Gateway-compatible clone
[cien185218](#) (VES98_F21)
[cien60357](#) (VES79_D19)

Cis-regulatory regions: [Otx -3541/1333](#)

Genome Browser

Link 1: Access to clone features

Link 2: Access to Gbrowse

Access full ORF gateway compatible clone information from the gene card (link 1)

"Link 1" will give you access to clone features: the corresponding page displays some features like the library where the clone came from, the vector used, the plate position in the Unigene collection. You will also find the different clone sequences corresponding to the clone and the cluster that the clone belongs to from the three assemblies.

Otx Gene card



Link 1

Clone cien185218

Features

- Name: cien185218 (Library clone name)
- Species: Ciona intestinalis
- Library: Gateway-compatible cien cDNA library (Marseille), mixed embryo (Library / Origin) (157985 clones)
- Tissue: whole_embryo (whole embryo)
- Organ: pDONR222 (Vector and plate position)
- Vector: VES98_F21
- Plate (Gene Collection v1 or Gateway full ORF collection 1):

In situ data (Link to in situ data)

Sequences

Clone name	Genbank ID	JGI Cluster	KYOTO Cluster	ENSEMBL Cluster
<input type="checkbox"/> cien185218	FK158284 (Genbank ID linked to clone features)	2344273	2511212	2515484 (Link to JGI, KYOTO, ENSEMBL cluster)
<input type="checkbox"/> cien185218	FK158285			

Select all Download

If you click on the Genbank ID:

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Chisearch

Search

FK158284 cien185218

Library clone name

Features

Name:

Species:

Description:

Sequence type:

Orientation:

Genbank ID:

Cluster JGI:

Cluster Kyoto:

Cluster ENSEMBL:

Clone name:

Library:

Tissue:

Organ:

Vector:

Corresponding gene:

Corresponding JGI transcript:

Corresponding KYOTOGRAIL transcript:

Corresponding ENSEMBL transcript:

Ciona intestinalis

gil192949931|gb|FK158284.1|FK158284.XABT185218.b1 Gateway

intestinalis mixed embryonic stages (Egg to Neurula) Ciona intestinalis

sequence

cDNA

5

FK158284

2344273

2511212

2515484

cien185218

Gateway-compatible cien cDNA library (Marseille), pDONR222

whole_embryo (Origin: Roscoff, France)

pDONR222

aniseedV3_3592 (oc / OTX1 / OTX2 / CRX / Ci-otx / Otx)

Description + JGI Gilchrist clone name

Link to JGI, KYOTO, ENSEMBL clustering

Library / Origin

Link to the gene card

In situ data

Link to in situ data

Sequence

Length: 673

ACCTGAT AATTTT GAAAAAT AGAGGTTT ATT AAATTT OT AAAAT AAGTT GATT GATT ACA
TCT ACAAGC AAGAGTTT GAAAAAT AAAAAT CAAGTT GAAAAAC GAAGCATTTT GAACG
AAAAAC AATTT CATTT CAAGT ACCACGGGTT CAATTCCTAACATGTCGATTTT GAATCT
CCCCACTACGCTATGAATGGACTGGGCTT AGGCCACGAT ATGAATCTCTTCACCTACAG
TCACCTATCCCGGCACTCTGCAGCTTGTACTTCCACAGANTCCAAGGAATGCACCAAGG
AGCTAAGAACATGCAATTTGGGGCCACCAGTATACAGTTCTGTCTAGAAAAACAAAGGCGA
GAGCGAACGACCTTCACACGAGCTCAACTCGATATTTTGGAGGTTTATTCCGGAAGACAA
GATATCCGAGATCTTTAGAGAGAAAGATTTGCCCTAAGAGTCAACTTCCAGAGTCCCG
AGTACAGGTGTGGTTCAAAATCSAGCAGCAAGGTCTGCCAAGAGTGCACACACAG
CAAAACAAAAATCCGGCTAGGTGGCAGTTCATCTATTCAAGCAGTACTGCTAGCA
GCAGCAGCGGAAGCGCCAGCAGCACCAACAGCAACANTAATAGCTCATCAAGTTCAANTAA
GA

Display entry in raw text format

Sequence

This page gives you an access point to clone features including a brief description (including the JGI/Gilchrist clone name), the type of sequence (EST or cDNA) and corresponding orientation (5' or 3' end). You can also directly link to Genbank information by clicking on the Genbank ID. You retrieve the library used, the vector used, the tissue or the organ that it comes from. There are also the gene model corresponding to the clone sequence and when available, a link to the in situ data. Finally, you can find the sequence. All the information of this page can be exported in raw text format by clicking on "Display entry in raw text format" at the bottom.

PS: you can also access clone features using the Genes/Clones/Cis-reg link in the Aniseed menu. Note that if you use the "find a cDNA clone by its identifier" link, you have to enter the exact clone name in the corresponding field (e.g. cien177890) and if you use the "find a clone sequence" link, you have to enter the Genbank ID (e.g. FK050052) :

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Find a Gene
Find Gene models by their gene ontology annotations
Find Gene models by their interpro annotations
Find Molecular Tools
Find a cDNA clone by its identifier
Find a clone sequence by its identifier

ED version 3:
Model organism database for *Ciona intestinalis*, *Halocynthia*
irradiata and *Phallusia mamillata*

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Clone search

Species: *Ciona intestinalis*

Name: cien185218 (0022E11, cic01106 ...)

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You can either click on the transcript name of interest to get the associated transcript card, or tick right of the transcript ID name to constitute a list of transcripts of interest that can be further restricted using the "Refine" button that enables sequential requests.

Matching records

Clone name: cien185218

Species: *Ciona intestinalis*

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Clone cien185218

Features

Name: cien185218
Species: *Ciona intestinalis*
Library: Gateway-compatible cien cDNA library (Marseille), mixed embryonic stages (Egg to Neurula) (157985 clones)
Tissue: whole_embryo (Origin: Roscoff, France)
Organ:
Vector: pDONR222
Plate (Gene Collection v1 or Gateway full ORF collection 1): VES98_F21

In situ data

Sequences

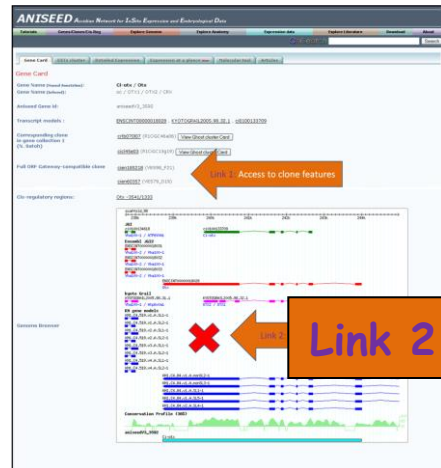
Clone name	Genbank ID	End	JGI Cluster	KYOTO Cluster	ENSEMBL Cluster
<input type="checkbox"/> cien185218	FK158284	5	2344273	2511212	2515484
<input type="checkbox"/> cien185218	FK158285	3			2515484

Select all Download

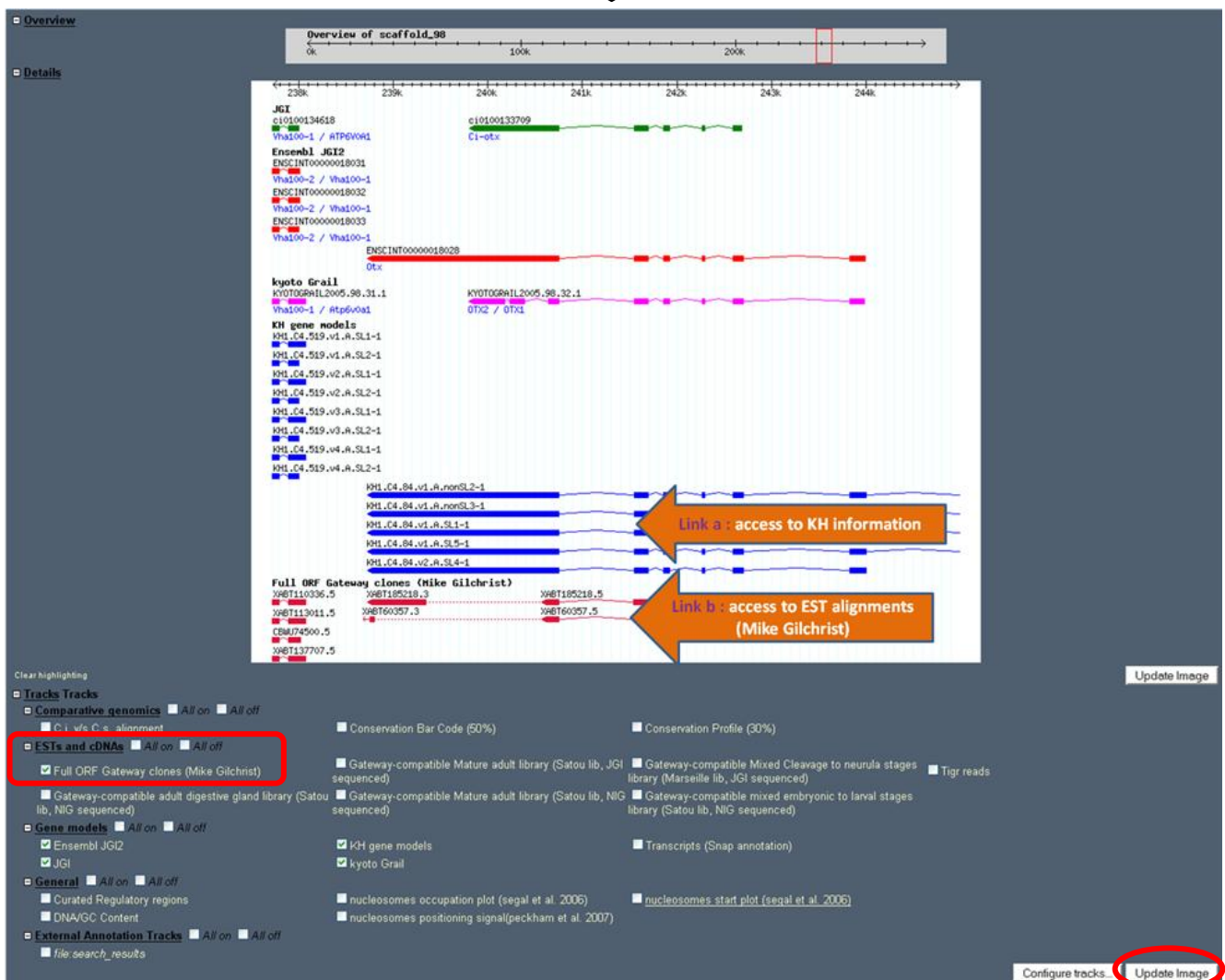
Access the Genome Browser from the gene card (link 2)

"Link 2" will give you access to the Genome Browser: the corresponding page displays the JGI v1.0, ENSEMBL Kyotograil2005 and KH gene models on the JGIv1.0 genome assembly. Click on a gene model and you will be linked to the corresponding gene card in Aniseed (see "link a" in the following figures). Move down to the « tracks » section and tick the 'Full ORF Gateway clones (Mike Gilchrist)' in the « ESTs and cDNAs (and other Gene models) » section. Update the image to show the track on the browser and then you can visualize Full ORF gateway clones. Click on a clone and you will be linked to the EST alignments of Mike Gilchrist (see "link b" in the following figures).

Otx Gene card



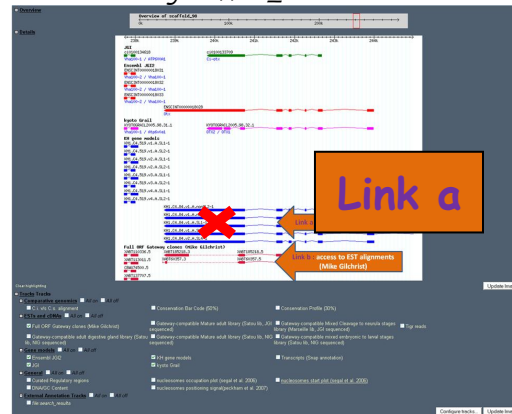
Link 2



Gbrowse showing scaffold_98, positions 237.724 to 244.993

"Link a" will give you access to corresponding gene card. Here, you can access the sequence (nucleotide and amino acid).

Gbrowse showing scaffold_98



↓ Link a

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Transcript model card

Sequence

ESTs cluster

EST count

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Export

KH.C4.84.v1.A.SL1-1

This page gives access to the functional annotation (name, scaffold, orthologues in mouse, human and drosophila, best blast hit in Swissprot, interpro domains and Gene Ontology classification). The other tabs give access to the sequence (nucleotide and aa), associated ESTs, EST counts in the various sequenced libraries, in situ data in WT and manipulated conditions, molecular tools (morpholinos, full length Gateway clones), microarray probes (to be implemented). The genomic annotations can be exported as a flat file via the export tab.

Features

Transcript model ID: KH.C4.84.v1.A.SL1-1

Possible biological name (manual annotation)*:

Possible biological name:

Aniseed Gene model: No match

Description:

Species: Ciona intestinalis

Scaffold:

Chr. number:

Strand:

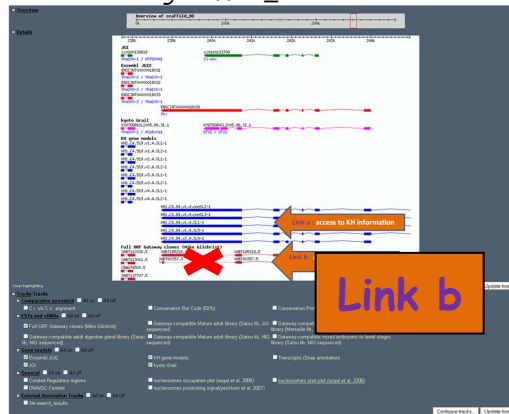
[illegible]

PS: you can also access the KH features using the "find a gene" link in the Genes/Clones/Cis-reg menu and entering the KH identifier in the corresponding box (see the "access gene information" section).

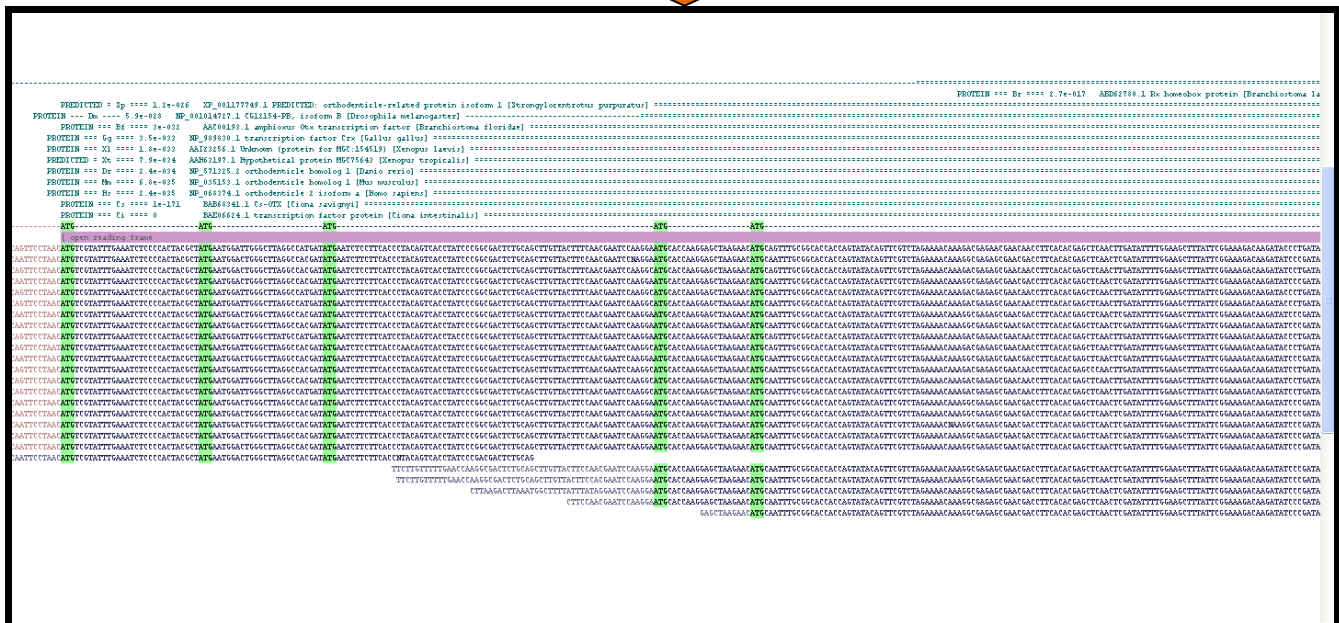
Access EST alignments from Gbrowse (link b)

"Link b" will give you access to the EST alignments of Mike Gilchrist.

Gbrowse showing scaffold_98



Link b



Don't hesitate to ask us if you cannot place a request you would like on ANISEED.

Delphine Dauga, 20th january 2009
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