ZFIN NEWS

The Zebrafish Information Network

http://zfin.org

Volume 3, Number 1
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In this issue:

*Be sure to attend the **7th International Conference on Zebrafish Development and Genetics**, June 14th - 18th, 2006 in Madison, Wisconsin. Click here for details.*

Find Great Probes Fast!

Find the best probes for any structure, directly from the structure's anatomy page.

Bernard and Christine Thisse have provided probe rankings to describe the intensity, specificity and contrast of their *in situ* patterns. The most useful anatomical probes show a restricted expression pattern and high contrast against the surrounding tissue. The best probes get 5 stars. Probes without stars haven't been ranked. The protocol that the Thisses use is online here: http://zfin.org/ZFIN/Methods/ThisseProtocol.html

Probes with the highest quality ratings (5 stars) are also accessible from the anatomy pages. Every probe that marks a structure is listed under 'high quality probes' on an anatomy page (Fig. 3). This does not mean that a probe on an anatomy page is the best probe for a structure, merely that it is a good probe that possibly can be used as a marker for the structure. If a gene has several probes not all of them will give the same results, so check the images before choosing a probe.

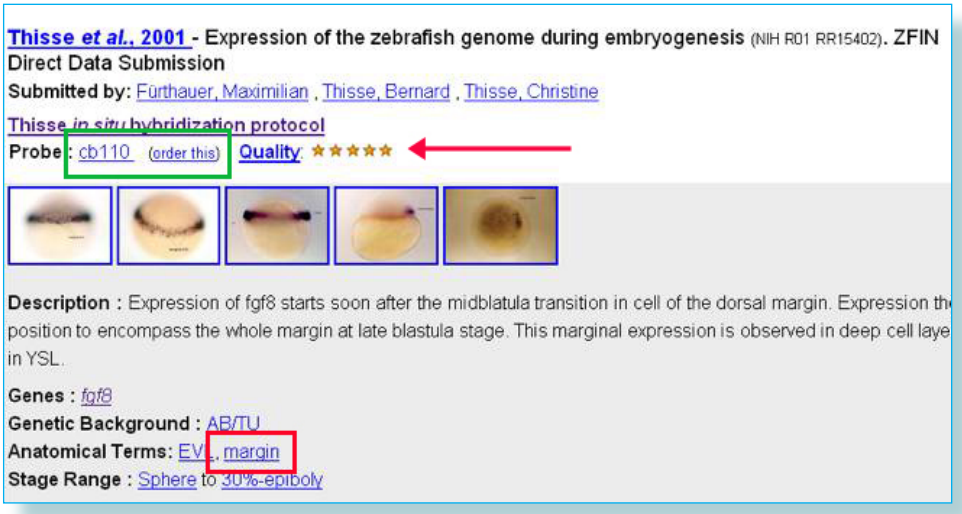

Fig. 1 *An example of a 5 star probe (red arrow). The margin (red box) has intense staining with little or no background. Later in development the probe also has intense staining, again with little background. The probe is outlined in green.*

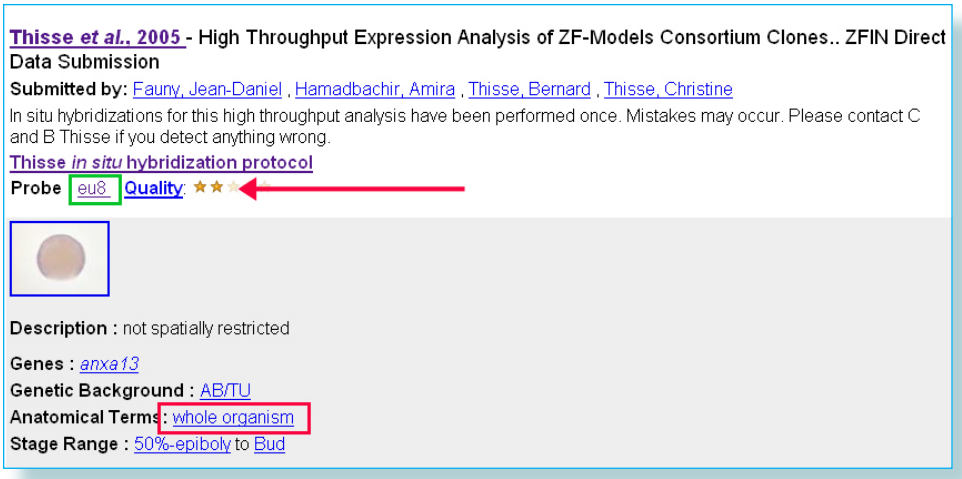

Fig. 2 *An example of a 2 star probe: The staining by this probe is faint throughout the entire embryo. The link to probe details is outlined in green. There is no "order this" link because eu probes were made by PCR from genomic DNA.*

Probes

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Technical information about the probes such as restriction enzymes or PCR primers can be found by clicking on their names.

Now that you know which probe you would like to use, how do you get it? Each gene page that has probes to order has a link that says "order this" after the probe. Note the green boxes in Fig. 4.

On expression pages the "order this" link follows the probe name. The links all look the same but will take you to different places where you can get information about where you can order the probe. Unfortunately we cannot yet populate order forms for you, but here is a set of directions to navigate the different sites where you could be taken:

The cb clones are available from ZIRC. The "order this" link by the clone name will take you to the ZIRC order page where, after you select ESTs/ cDNAs, you will be asked to agree to the Transfer of Biological Materials and then can order the clones. These probes reference Thisse *et al.*, 2001

Eu probes are different than the other probes. Note that in Fig. 2 there is no "order this" link after eu8 (Green box). The eu probes were amplified from genomic DNA.

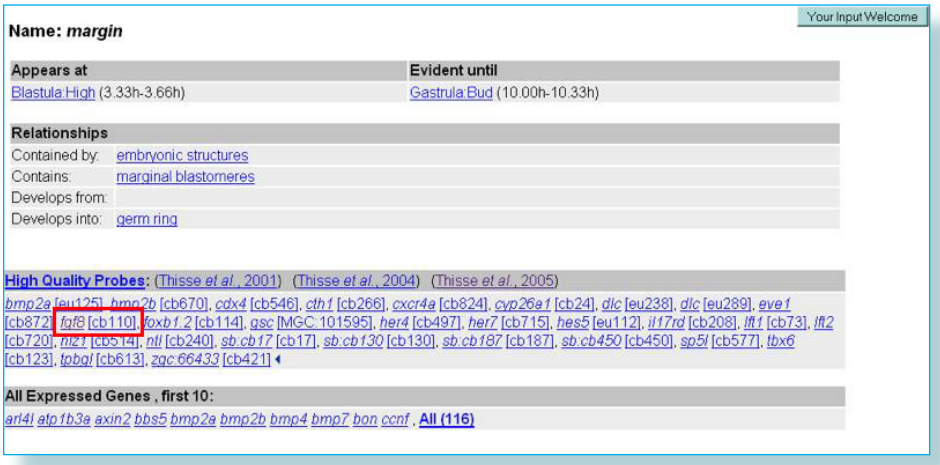

Fig. 3 *An example of how 5 star probes are displayed on the Anatomy pages. In this example the structure is the margin, and you can see fgf8 and the probe outlined in red.*

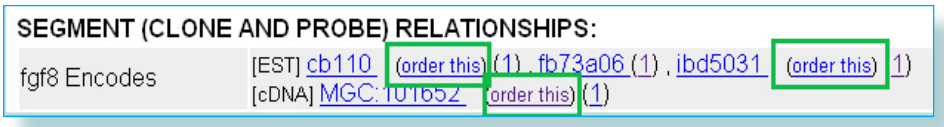

Fig. 4 *On the Gene page the "order this" link is in the Segment (Clone and Probe) Relationship section. After each probe or clone that is available for purchase there is a link to information about where to get a clone.*

The primers are based on Sanger Ensembl gene predictions. Eu probes reference Thisse *et al.*, 2005.

To find the primer sequences click on the clone link. This will take you to the clone page where the primers are listed under PCR Amplification.

To confirm the location and size of the predicted product, BLAST the primers at Ensembl, configured with a word size of 4 and -B of 1000.

IMAGE and ZGC clones from Thisse *et al.*, 2004 are available from several different sources.

The following is a list of the ZGC and IMAGE distributors with directions where to go once you reach their web sites.

American Type Culture Collection, Manassas, VA
Select "Molecular Genomics" in the left side bar under ATCC Bioproducts. Then select "search for clones". This will take you to a page where you can search for the clone by either the numeric portion of the clone name or by the GenBank number (listed on the gene or clone page).

Open Biosystems, Huntsville, AL
Paste only the number from the clone name into the search box and hit the submit button.

Probes

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Research Genetics/Invitrogen, Carlsbad, CA
Click on the "CloneRanger" link and enter the GenBank number. This company is listed on the ZGC page, but currently does not stock zebrafish clones.

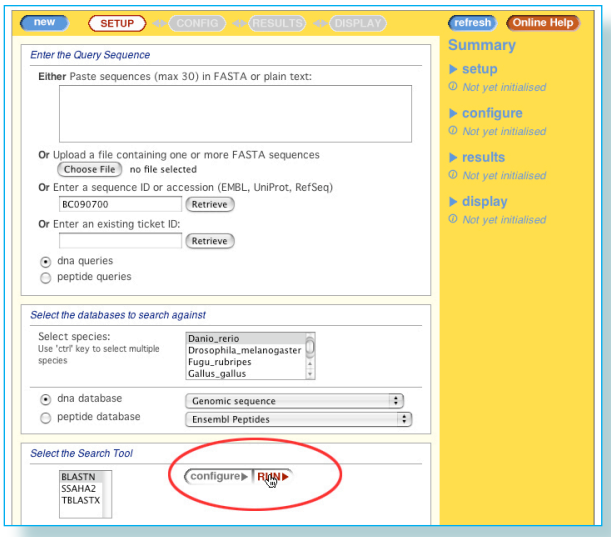
Geneservice Ltd, Cambridge, UK
From the home page select "IMAGE/MGC" from the menu on the left. Search for numeric portion of the clone name.

RZPD German Resource Center for Genome Research, Berlin Germany
Select "Product Search" on the left menu bar. Then select "Clones" or "GenomeCube". Select organism and enter the numeric portion of the clone name.

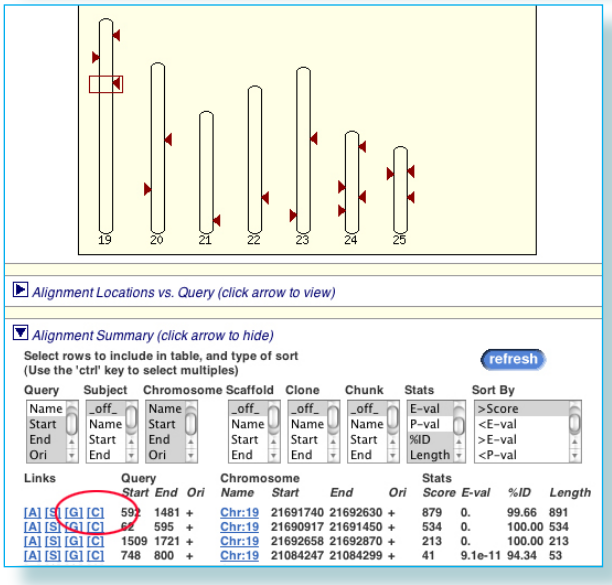
From Ensembl To ZFIN Expression Patterns

The ZFIN expression patterns were recently mapped to the Sanger zebrafish genome assembly (Zv5). This guide shows you how to access ZFIN expression patterns from Ensembl.

1. Launch a BLAST search at Ensembl.



2. On the BLAST results page, scroll down and select Contig View (click on "C").



Ensembl

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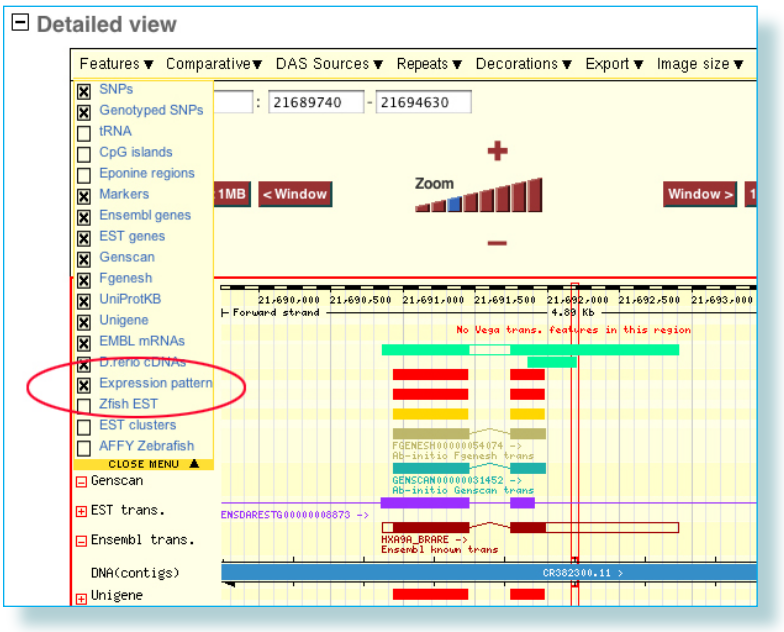
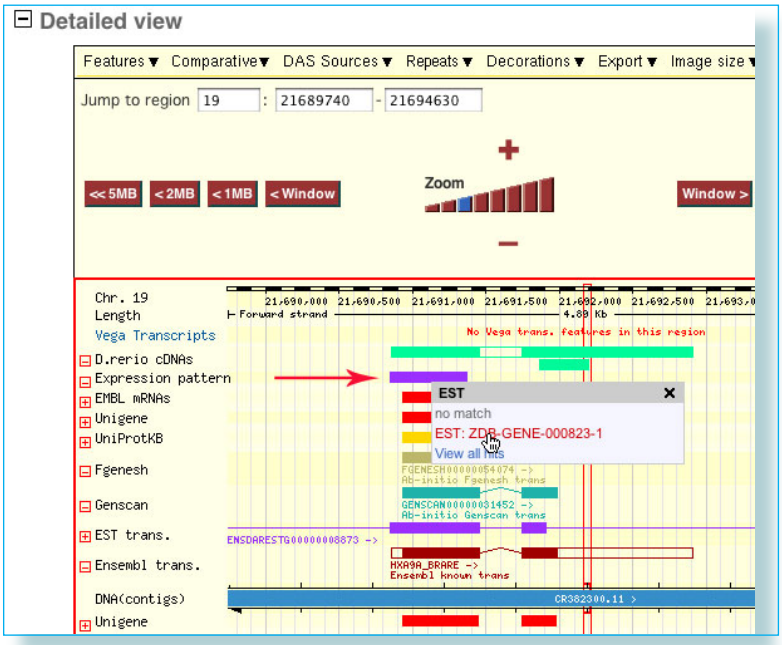
3. On the Contig page, click on the "Features" drop-down menu, and select "Expression pattern". After you close the "Features" menu, the Expression Pattern track will load.



4. Click on the Expression Pattern track (shown in purple). An EST box will pop up. Clicking on the EST identifier in the EST box will take you to the ZFIN expression pattern report.

The expression track allows you to explore the expression pattern of multiple genes in a genomic region.



Be sure to attend the Madison Meeting!

Deadline date for abstract submissions: Monday, April 3rd

Registration deadline: Friday, May 12th
click here for details