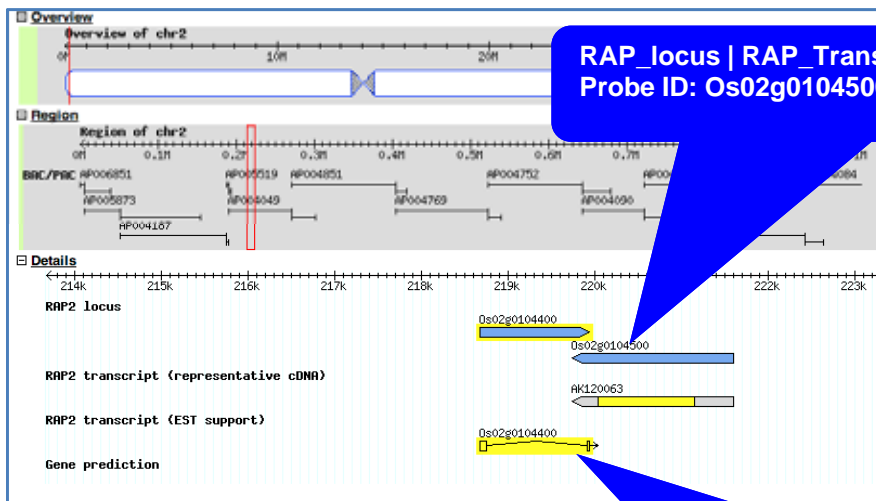


# Rice 44K Microarray Probe Design

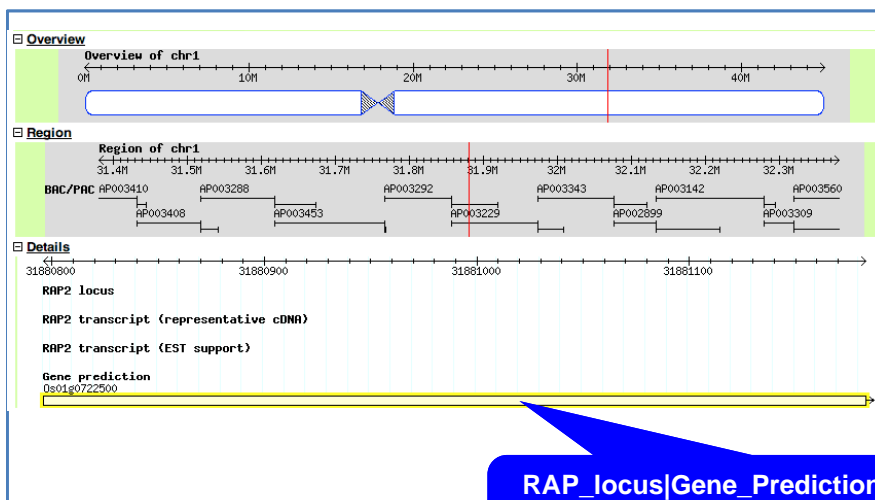
The rice 44K microarray was designed based on the manually curated annotation of the rice genome as described in the Rice Annotation Project Database (RAP-DB) and consisted of 60-mer oligo sequences corresponding to RAP loci with transcripts based on rice full-length cDNA (representative cDNA), transcripts based on EST support, as well as transcripts based on *ab initio* gene prediction. The probes are classified as follows:

- RAP\_locus | RAP\_Transcript (representative cDNA): 32,325
- RAP\_locus | RAP\_Transcript (EST support): 6,943
- Predicted locus | Gene\_Prediction: 2,612
- Others



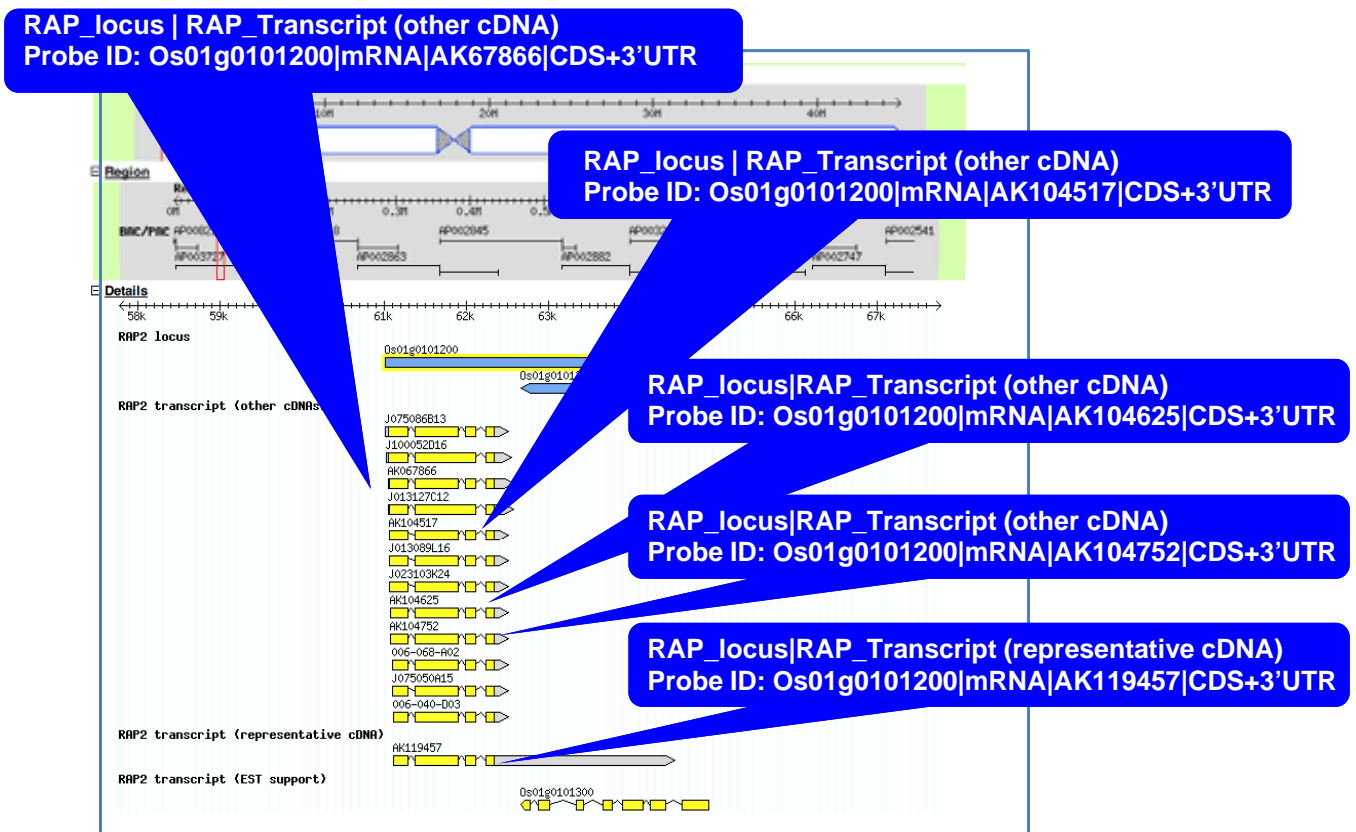
**RAP\_locus | RAP\_Transcript (representative cDNA)**  
**Probe ID: Os02g0104500|mRNA|AK120063|CDS+3'UTR**

**RAP\_locus | RAP\_Transcript (EST support)**  
**Probe ID: Os02g0104400|COMBINER\_EST|CB645227**



**RAP\_locus|Gene\_Prediction**  
**Probe ID: Os01g0722500|Combiner|C1389397**

In the case of several full-length cDNAs mapped in a single locus, multiple 60-mer probes were designed based on the sequence information of a representative full-length cDNA as well as the sequence of other full-length cDNAs to show the unique expression of the gene. Since the length of these mapped full-length cDNAs vary, the 60-mer sequence for each probe may also differ from each other. Multiple probes with same sequence were also designed to provide evidence on replicability and reliability of the expression data. An example is shown below with 5 probes designed for a single RAP locus (Os01g0101200).



**Os01g0101200|mRNA|AK67866|CDS+3'UTR**  
 CCATCCAAACCTGGAACAACAATTCAGATGCATATACTACTACTTTACATTTGTTTCCTT

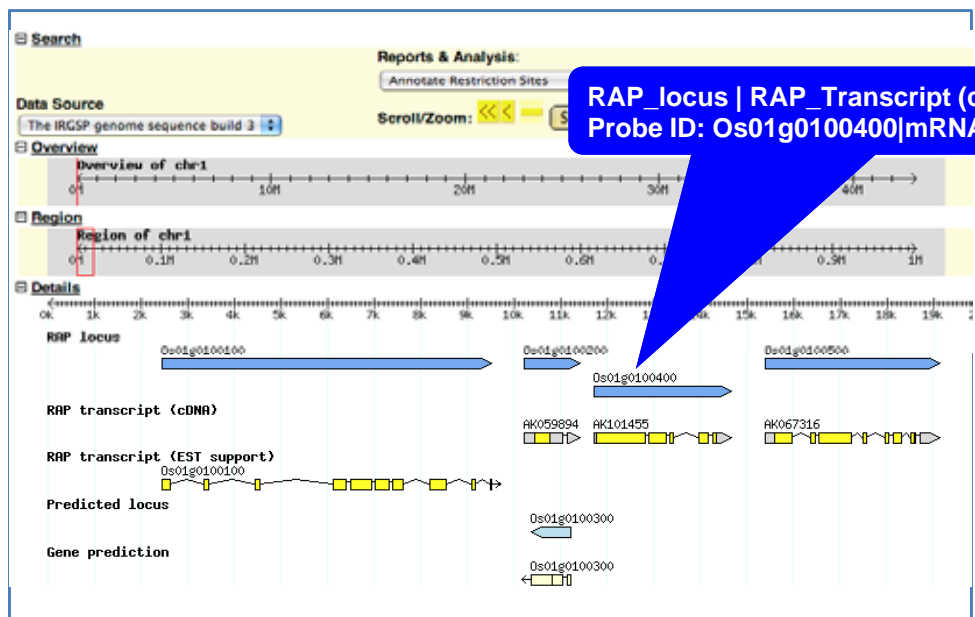
**Os01g0101200|mRNA|AK104517|CDS+3'UTR**  
 GGGTGTAATAAATGTGTAATAGTCCCAATCAAGCTAATACTATCATGCTCCCATTCCAT

**Os01g0101200|mRNA|AK104625|CDS+3'UTR**  
 CTGGGGTGTAATAAATGTGTAATAGTCCCAATCAAGCTAATACTATCATGCTCCCATTCC

**Os01g0101200|mRNA|AK104752|CDS+3'UTR**  
 CTGGGGTGTAATAAATGTGTAATAGTCCCAATCAAGCTAATACTATCATGCTCCCATTCC

**Os01g0101200|mRNA|AK119457|CDS+3'UTR**  
 CCATCCAAACCTGGAACAACAATTCAGATGCATATACTACTACTTTACATTTGTTTCCTT

Additionally, some probes correspond to RAP loci which are no longer mapped in the current version of RAP-DB. These probes were originally included in the rice 22K microarray which consisted of probes designed based on the annotation of the IRGSP Build 3.0 pseudomolecules.



The list of deleted RAP loci RAP loci in the IRGSP Build 4.0 annotation with cDNA support can be accessed at [http://rapdb.dna.affrc.go.jp/obsolete\\_list\\_a.txt](http://rapdb.dna.affrc.go.jp/obsolete_list_a.txt)

The list of deleted RAP loci in the IRGSP Build 4.0 based on abnatio gene prediction can be accessed at [http://rapdb.dna.affrc.go.jp/obsolete\\_list\\_b.txt](http://rapdb.dna.affrc.go.jp/obsolete_list_b.txt)