

Array Tips

Useful tips and quick updates to help you get the most from your microarray experiments

Array Version Numbers: What do they mean to microarray users?

The version number follows the name of the array, for example, Hum19k8 is version 8 of the Human 19k cDNA array (array spotted with 19,008 ESTs).

What does a new version mean?

Changes in version number can indicate changes in the array content. In 2002, we sequenced the Human 19K clone set in-house and removed cross-contaminated clones (more than one PCR product/sequence present for a given clone). We have also included various control spots (Arabidopsis, spotting solution negative control, and SpotReport Alien (Stratagene) spots) on recent versions of certain arrays. In some cases, changes to a clone set are so large that it warrants changing the name of the product. For example, when over 2,500 redundant clones were removed from the Mouse CGI 7.3kv1 array, the revised array became known as the Mouse CGI 4.6kv1.

Changes in version number can also indicate changes in array layout. For example, printing with a larger pinhead (more pins) is more time-efficient than printing with fewer pins. Revisions in manufacturing protocol have allowed us to introduce 32-pin or 48-pin printing, which results in arrays with 4 x 8 subarrays and 4 x 12 subarrays, respectively.

A final reason for a version number change is when a new lot of PCR product is being used to print the arrays. When a set of printing plates has been depleted, the master clone set has to be re-amplified by PCR, purified, and resuspended in spotting solution at the proper concentration. Although the same set of clones are amplified and spotted in the same position on the array, a new version number is assigned to indicate that the source printing plates has been replaced.

Why should users be concerned about array versions?

It is critical that users be aware of which array versions they are using in order to properly identify each element on the array. Gene lists for all array products are available for download from <http://www.microarrays.ca/products/glists.html>.

We recommend that users avoid using arrays with different version numbers as part of the same project, particularly when the version change represents a large content change of the clone set. Please advise us when ordering arrays for a very large project, especially if the arrays will be purchased over several months, so we can let you know of any potential future changes.