The MegAllele™ Genotyping Mouse 5K SNP Panel contains approximately 5,000 SNPs in a highly multiplexed assay. It allows individual researchers to perform high-resolution linkage mapping studies on mouse strains, resulting in approximately 1,500 informative markers for every cross of twenty common strains. The MegAllele Genotyping Mouse 5K SNP Panel is designed to work with the Affymetrix GeneChip® Scanner 3000 (with the appropriate upgrade).

**Features and Benefits**

- Complete coverage of the genome including regions underrepresented by standard panels of microsatellite marker panels, such as telomeres.
- Improved marker density and spacing (four to tenfold) over mapping that is based on microsatellite panels, at an equivalent price.
- Mapping resolution to a 1cM (~2Mb) region.
- Optimized design provides an off-the-shelf resource for genotyping crosses of the most common mouse strains.
- The MegAllele Genotyping Mouse 5K SNP Panel enables rapid, high-resolution genetic mapping which obviates the need for a cross-specific custom SNP assay design.

**Panel Design**

The SNPs used for this panel come from dbSNP, mapped to the mouse genome. The median number of informative markers is 1,500 SNPs across any two strains chosen from A/J, AKR, 129S1/SvJ, C57BL/6J, DBA/2J, C3H/HeJ, C57L/J, SJL, NOD, BALB/c, BTBR, NZB/BINJ, CBA/Ca, CAST/Ei, PWD/Ph, CZECHII/Ei, NZO/HIJ, PERC/Ei, WSB/Ei, C3H/HeN, C57BL/10, DBA/2, and FVB/NJ. The number of informative markers is lower for crosses between closely related strains (such as C57BL/6J and C57BL/10J) and higher for more distantly related strains.

**Coverage and Performance**

The SNP selection algorithm used for the panel design is optimized for the maximum number of informative markers between common mouse strains and minimal interval size by equally spacing markers across the mouse genome. Approximately 5,500 SNPs were selected from an initial set of 565,062 SNPs present in dbSNP build 121 and mapped in mouse genome build 32. Figure 1 shows the genome coverage of the MegAllele Genotyping Mouse 5K SNP Panel. Figure 2 shows the interval distribution between selected crosses. For each SNP, the number of crosses for which the SNP is informative dictates the height of the markers shown.
Ordering Information

MegAllele™ Genotyping Mouse 5K SNP Panel Kit

900631 Kit contains enough reagents to process a total of 24 assays (including 2 controls)

GeneChip® ParAllele TrueTag™ 5K-B Array

900659 ParAllele TrueTag Arrays have approximately 5K features on each array that can detect 5K SNPs using the MegAllele™ Genotyping System. (6 pack)

900660 (96 pack)

REFERENCES