WHAT IS CLAIMED IS:

1. A method for assessing immune response in a murine model, the method comprising:

obtaining a sample from the murine model;

detecting the expression level of a panel of genes in the sample, wherein the panel comprises at least 50 genes selected from the group as shown in Table 1;

comparing the expression level of the panel to a reference expression level; and

assessing the immune response in the murine model.

2. The method of claim 1, wherein the murine model has a tumor.

3. The method of claim 1, wherein the sample is a tumor tissue.

4. The method of claim 1, wherein the murine model been treated with a therapy.

5. The method of claim 4, wherein the therapy is an immune therapy.

6. The method of claim 1, where the expression of the panel of genes is detected using NGS.

7. The method of claim 1, wherein the immune response is assessed by determining the amount or activation of an immune cell in the sample, wherein the immune cell is selected from the group consisting of B-cell, dendritic cell, macrophage, monocyte, natural killer cell, CD4+ T cell and CD8+ T cell.

8. A method for evaluating a treatment in a murine model, compris

administering a treatment to a murine model;

obtaining a sample from the murine model;

detecting the expression level of a panel of genes in the sample, wherein the panel comprises at least 50 genes selected from the group as shown in **Table 1**;

comparing the expression level of the panel to a reference expression level; and

evaluating the immune response in the murine model.

9. A kit for assessing immune response in a murine model comprising primers for

detecting the expression of a panel of genes in a sample from the murine model, wherein the panel comprises at least 50 genes selected from the group as shown in Table 1.

10. A kit for assessing immune response in a murine model comprising probes for enriching the mRNA of a panel of genes in a sample from the murine model, wherein the panel comprises at least 50 genes selected from the group as shown in Table 1.

11. A microarray for assessing immune response in a murine model comprising probes for detecting the expression level of a panel of genes in a sample from the murine model, wherein the panel comprises at least 50 genes selected from the group as shown in Table 1.

12. A non-transitory computer readable medium having instructions stored thereon, wherein the instructions, when executed by a processor, cause the processor to:

retrieving the expression level of a panel of genes in the sample, wherein the panel comprises at least 50 genes selected from the group as shown in Table 1;

comparing the expression level of the panel to a reference expression level; and

assessing the immune response in the murine model.