CLAIMS:

1. A method for measuring cell-mediated immune response activity in a subject, said method comprising contacting lymphocytes from the subject with at least two sets of peptides, a first set comprising at least one peptide of from about 7 to 14 amino acid residues in length and a second set comprising at least one peptide of from 16 amino acid residues or greater which peptides encompass all or part of a protein antigen and measuring the presence or elevation in the level of an immune effector molecule from immune cells wherein the presence or level of the immune effector molecule is indicative of the level of cell-mediated responsiveness of the subject.

2. The method of Claim 1 wherein the subject is a human.

3. The method of Claim 1 wherein the 7 to 14 amino acid peptides are recognized by ~~CD4~~CD8$^+$ lymphocytes and the 16 amino acid or greater peptides are recognized by ~~CD8~~CD4$^+$ lymphocytes.

4. The method of Claim 1 wherein the sample is undiluted whole blood.

5. The method of Claim 4 wherein the sample is whole blood which comprises from about 10% to 100% by volume of the sample to be assayed.

6. The method of Claim 5 wherein the whole blood comprises from about 50% to 100% by volume of the sample to be assayed.

7. The method of Claim 6 wherein the whole blood comprises from about 80% to 100% by volume of the sample to be assayed.

8. The method of Claim 1 wherein the whole blood is collected in a tube comprising heparin.