WHAT IS CLAIMED IS:

1. A kit for identifying at least one polypeptide having a desired activity for a ligand of interest, consisting:

(i) at least one plurality of active addressable polypeptide variants, wherein each member of each plurality of the active polypeptide variants reacts with at least one ligand to produce a detectable signal, and wherein at least two members of each plurality of the active polypeptide variants are related to a parent polypeptide and are capable of reacting with different ligands, wherein the different ligands do not react with the parent polypeptide;

(ii) at least one ligand, wherein said ligand is placed within the wells of a microtiter plate;

and

(iii) instructions for use.

2. The kit of Claim 1, wherein said at least one ligand is immobilized in the wells of said microtiter plate.

3. A kit for identifying at least one polypeptide having a desired activity for a ligand of interest, consisting:

(i) at least one plurality of active addressable polypeptide variants, wherein each member of each plurality of the active polypeptide variants reacts with at least one ligand to produce a detectable signal, and wherein at least two members of each plurality of the active polypeptide variants are related to a parent polypeptide and are capable of reacting with different ligands, wherein the different ligands do not react with the parent polypeptide wherein each member of said plurality of active polypeptide variants is placed within a well of a microtiter plate;

(ii) at least one ligand;

and

(iii) instructions for use.