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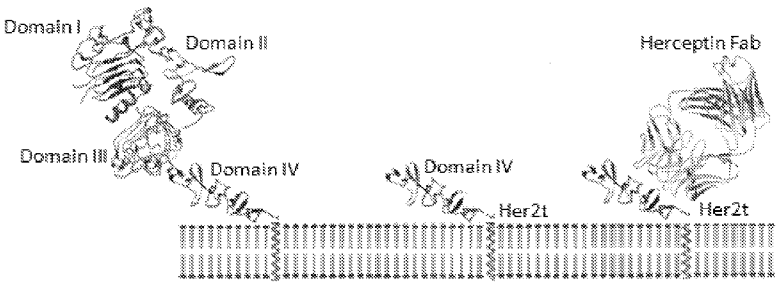
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(54) Title: TRANSGENE GENETIC TAGS AND METHODS OF USE

FIG. IA



(57) Abstract: The present invention provides genetic tags operably linked to transgenes. The expression of the genetic tag allows identification, detection, selection, and ablation of cells expressing the transgene and the genetic tag. In some alternatives the genetically modified host cell comprises a transgene comprising a polynucleotide coding for a chimeric antigen receptor comprising a ligand binding domain, a polynucleotide comprising a spacer region, a polynucleotide comprising a transmembrane domain, and a polynucleotide comprising an intracellular signaling domain and a polynucleotide coding for a genetic tag. In some alternatives the genetically modified host cell comprises a transgene comprising a polynucleotide coding for a chimeric antigen receptor comprising a ligand binding domain, a polynucleotide comprising a spacer region, a polynucleotide comprising a transmembrane domain, and a polynucleotide comprising an intracellular signaling domain and a polynucleotide coding for a genetic tag, and wherein the polypeptide further comprises a flexible linker comprising amino acids GGGSGGGS (SEQ ID NO: 45). Pharmaceutical formulations produced by the method, and methods of using the same, are also described.

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