

COMPOSITIONS AND METHODS FOR METABOLIC SELECTION OF TRANSFECTED CELLS

ABSTRACT

The present invention relates to novel selection marker vectors, and methods for using these vectors to generate stable gene expression systems in eukaryotic cells. More specifically, the present invention provides compositions and methods utilizing any enzyme useful in the eukaryotic sterol/cholesterol biosynthetic pathway, such as a 3-ketosteroid reductase, as a metabolic selection marker to select transfected cells. In one embodiment, the method comprises transfecting cells that are auxotrophic for cholesterol with a vector encoding 3-ketosteroid reductase and at least one heterologous protein, and selecting cells that have the ability to survive in medium lacking cholesterol and/or producing the heterologous protein in these cells in chemically defined and/or serum-free media.

Figure 2