Expression vector element combinations, novel production cell generation methods and their use for the recombinant production of polypeptides

Abstract

Herein is reported that for transient transfections the use of the human elongation factor 1 alpha promoter (with Intron A) provides for an enhanced productivity (in LC-HC-SM organization), the use of the bovine growth hormone polyA signal sequence provides for an enhanced productivity compared to use of the SV40 polyA signal sequence, the addition of the HGT to the bGH PolyA signal sequence results in an increased productivity in vectors containing the hCMV promoter and the vector organization LC(3`-5´)-HC-SM results in improved expression. For stable pools it is reported that pools generated with vectors containing the hEF1α promoter show an enhanced productivity in batch analysis, clones generated with vectors containing the hEF1α promoter show a reduced number of low producing clones, and clones generated with vectors containing the hEF1α promoter show a higher stability of IgG expression. For single clones it is reported that the vector organization with downstream position of selection marker (LC-HC-SM) has a positive effect on productivity of single clones and that clones generated with vectors containing the bGH polyA signal sequence and the hGT have higher productivities.

[Fig. 10A]