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Generation of Plasmid DNA Expressing Species-Specific Horse VEGF164 and FGF2 Factors for Gene Therapy

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Abstract

© 2016, Springer Science+Business Media New York. In this study, we have generated a dual expression cassette plasmid DNA (pDNA) construct containing the species-specific horse (*Equus caballus*) codon optimized sequence encoding potent pro-angiogenic vascular endothelial growth factor (VEGF164) and basic fibroblast growth factor (FGF2) under eukaryotic promoters (EF-1 α and CMV promoters, respectively). We have demonstrated effective and simultaneous recombinant proteins expression in vitro. Resulting pDNA is suitable for potential gene therapy applications in horses.

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Keywords

Fibroblast growth factor 2, Gene therapy, Horse, Plasmid DNA, Vascular endothelial growth factor 164