

研究论文

高产人参寡糖素培养细胞变异克隆系的筛选

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摘要 用2mmol/L的MNNG处理经过滤的人参悬浮培养细胞1小时后,细胞存活率下降显著,细胞克隆植板率只是对照组的10.12%。经细胞平板克隆共获得克隆系151株,其中很多克隆系在转移培养中生长缓慢,甚至不生长而死亡。经分析可供测定的克隆系生长和寡糖素含量的差异,对11株寡糖素含量较高克隆系经连续10代继代培养观察,选出一株稳定高产人参寡糖素优良克隆系PGMB-37,其平均生长速率是0.558gDWL⁻¹d⁻¹,为亲本的1.5倍,平均寡糖素含量是14.67%DW,平均寡糖素产率是2.456g/L,分别比亲本高70%和156%,并且它的过氧化物酶同工酶谱特征与亲本之间也呈稳定性差异。

关键词 [人参](#) [寡糖素](#) [变异克隆系](#) [过氧化物酶同工酶](#)

分类号

SCREENING OF VARIANT CLONE LINE WITH HIGH YIELDING OLIGOSACCHARIN FROM SUSPENSION CULTURE CELL OF PANAX GINSENG

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Abstract

The suspension cells of *Panax ginseng* which had been filtrated, were treated with mutagenic compound, N-methyl-N'-nitro-N-nitrosoguanidine at 2 mmol / L, for 1 hour. Cell viability was remarkably decreased and the formation of cell clone was only 10.12 of control. Cells treated were plated on a nutrient agar medium. More than 150 clone lines were obtained after plating culture of 60 days, of which many clone lines grew slow or stopped growing and died during transplantation culture.

Key words [Panax ginseng](#) [Oligosaccharin](#) [Variant clone line](#) [Peroxidase isozyme](#)

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