

依赖于DNA和RNA聚合酶的研究 II .615小鼠肝细胞核RNA聚合酶A、B、C的提取、分离和鉴定

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摘要 在80mM硫酸铵离子浓度下, B酶能选择性地吸附在DEAE-纤维DE52上, 从而和A、C酶分开, 用500mM硫酸铵洗脱, 呈现单一的峰。在50mM硫酸铵离子浓度下, 将A、C酶吸附在DEAE-SephadeA25上, 经50—500mM硫酸铵线性梯度洗脱, 得到A酶和C酶两个峰。测定了这三种酶对a-鹅膏碱的(在最高浓度为200微克/毫升时, 酶活完全不受抑制); B酶在a-鹅膏碱浓度为0.2微升时, 活性受到50%以上的抑制; C酶在a-鹅抗B酶的抗血清, 这种抗血清在双向免疫扩散实验中和B酶之间产生沉淀反应, 而和A酶或C酶之间不产生沉淀反应。

关键词

分类号

STUDIES ON DNA-DEPENDENT RNA POLYMERASES II. The Extraction, dSeparation and Characterization of RNA Polymerases A, B and C from Livers of 615 Mice

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Abstract

RNA polymerases A, B and C have been extracted and separated from livers of 615 mice. The methods for extraction and separation are described. Under the ionic strength of 80 mM ammonium sulphate, enzyme B could be selectively adsorbed on DEAE-cellulose DE52 (therefore, it could be separated from enzymes A and C). After elution with 500 mM ammonium sulphate, the elution profile gives a single peak. Under the ionic strength of 50 mM ammonium sulphate, enzymes A and C could be adsorbed on DEAE-Sephadex A25. After elution with 50—500 mM linear gradient of ammonium sulphate, the elution profile gives two peaks corresponding to enzyme A and C respectively. The sensitivity of the three enzymes to A-amanitin is determined. RNA polymerase A is resistant to A-amanitin (until the highest concentration determined, 200 µg/ml of a-amanitin, the enzyme is not inhibited at all); RNA polymerase B is inhibited more than 50% by 0.2 µg/ml of a-amanitin; RNA polymerase C is inhibited more than 50% by 100 µg/ml of a-amanitin.

Key words

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