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Electron immunohistochemical analysis of localization of neutral Mn²⁺-dependent DNAse. III. Visualization of DNAse binding to isolated chromatin | Elektronnoe immunogistokhimicheskoe izuchenie lokalizatsii neutral'noi Mn²⁺-zavisimoi DNKazy. III. Vizualizatsiia sviazyvaniia DNKazy s izolirovannym khromatinom.

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Abstract

Neutral Mn(2+)-dependent DNAse is localized on isolated chromatin structures in both normal and regenerating rat liver. The enzyme was revealed located along the whole length of nucleosomal chain and in hypernucleosomal structures. However, as concerns the quantity of the enzyme, it was distributed unevenly along the chromatin, thus reflecting the pattern of different functional states of native chromatin. According to biochemical and immunohistochemical data, DNAse can hydrolyse in vitro only one-stranded DNA. One of possible explanations of the observed differences in DNAse binding with native DNA chromatin and its inability to adsorb on native DNA in vitro may be the presence of hypothetical DNA-binding proteins in native chromatin making complexes with DNAse and thereby responsible for immobilization of the enzyme on chromatin structures in vivo.
