Control of gene expression and proteosynthesis

The amount of individual substances in the cell is controlled not only by the intensity of their synthesis, but also by the intensity of their breakdown or release. The synthesis of nucleic acids and proteins is regulated at the level of transcription, at the level of post-transcriptional modifications, during translation and during post-translational modifications of the product. During the life of a single cell, only a part of the information stored in the DNA is always expressed at a certain moment. Only those gene products that are necessary for the cell or the organism at a given moment are synthesized. The spectrum of active genes changes during the reactions of the cell with factors of the extracellular environment (nutritional factors, hormones, transmitters) and also during the development of the cell and during its differentiation from an embryonic to a specialized cell. A large part of the disease is caused precisely by disorders of the molecular mechanism of gene expression regulation.

Links

Related articles

- Control of gene expression and proteosynthesis in prokaryotes
- Control of gene expression and proteosynthesis in eukaryotes
- Gene
- Gene expression
- Transcription
- Translation

Bibliography

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