Download Regulation Of Gene Expression By Small Rnas

Regulation of gene expression, or gene regulation, includes a wide range of mechanisms that are used by cells to increase or decrease the production of specific gene products (protein or RNA).Sophisticated programs of gene expression are widely observed in biology, for example to trigger developmental pathways, respond to environmental stimuli, or adapt to new food sources.Gene expression is the process by which information from a gene is used in the synthesis of a functional gene product.These products are often proteins, but in non-protein coding genes such as transfer RNA (tRNA) or small nuclear RNA (snRNA) genes, the product is a functional RNA.. The process of gene expression is used by all known life—eukaryotes (including multicellular organisms ...Key Concepts: • Bacteria often respond to environmental change by regulating transcription • Eukaryotic gene expression is regulated at many stages • Noncoding RNAs play multiple roles in controlling gene expression • A program of differential gene expression leads to the different cell types in a… Learn with flashcards, games, and more — for free.The lac Operon. The lac operon (see diagram below) consists of one regulatory gene (the i gene) and three structural genes (z, y, and a).The i gene codes for the repressor of the lac operon. The z gene codes for ?-galactosidase (?-gal), which is primarily responsible for the hydrolysis of the disaccharide, lactose into its monomeric units, galactose and glucose.