microRNAs in molecular biology MicroRNAs (miRNAs) are small, non-coding RNA molecules that play a crucial role in the regulation of gene expression.This interaction is essential for the fine regulation of protein levels in cells, allowing precise control over various cellular processes.miRNAs are implicated in numerous biological functions.In the context of cancer, some miRNAs can act as oncogenes by promoting cell proliferation, while others may function as tumor suppressors by inhibiting genes that drive tumor growth.The increasing interest in miRNAs as biomarkers and therapeutic targets has led to intensive research.Within this complex, miRNAs guide the degradation or inhibition of target mRNAs by binding to complementary sequences located in the 3' untranslated regions (UTRs) of these mRNAs.miRNAs are involved in various biological processes, including development, cellular differentiation, and immune response.

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