

Ribonucleic Acid

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Ribonucleic acid (RNA), a nucleic acid, consists of nucleotides. Each nucleotide is made up of a ribose, a phosphate group, and a nitrogenous base, which can either be adenine, cytosine, guanine, uracil. RNA differs from DNA in that RNA has uracil in place of thymine and has ribose in place of deoxyribose.

In addition to functional groups attached on the RNA molecule, the ability for RNA to form hydrogen bonds with other molecules and with itself allows it to be very diversified and multifunctional. In recent years, numerous non-coding RNAs (ncRNAs) have been found. The accumulation of these non-coding RNAs in the RNA databases has given the suggestion that ncRNAs may play an important role in many important mechanisms in eukaryotic cells. Some of the more well known types of ncRNAs include transfer RNAs (tRNAs), ribosomal RNAs (rRNAs), microRNAs, small interfering RNAs (siRNAs), small nucleolar RNAs (snoRNAs), small nuclear RNAs (snRNAs), small modulatory RNAs (smRNAs), and Piwi interacting RNAs (piRNAs) <ref:cff07>.