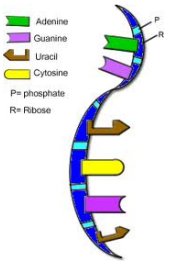
Buy from flipkart.com

Overview of RNA

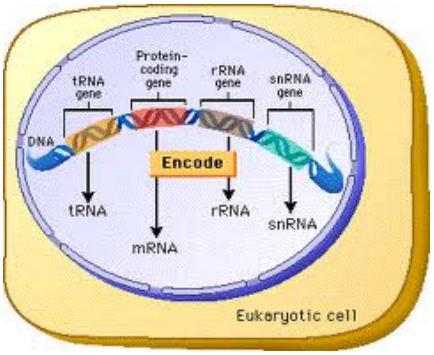
Created: Thursday, 21 July 2011 05:51 | Published: Thursday, 21 July 2011 05:51 | Written by Super User | Print

Types of RNA



RNA – a Recap

RNA is known as Ribonucleic Acid. It is as similar as DNA but varies in some features only. It has Ribose sugar and the Thymine base of DNA is replaced with Uracil base.



Messenger RNA:

From DNA to theribosome the information is carried by mRNA. Ribosomes play an important role in protein synthesis and translation process.

Amino acid sequence of synthesized protein has been determined by the coding sequence of mRNA. In eukaryotes, 97% of the transcriptional units are non-coding proteins. So, many RNAs do not code for protein.

Non-coding RNAs are generally noted as ncRNA. The ncRNA can be encoded by own genes. Sometimes it is derive from mRNA introns too.

Transfer RNA (tRNA) andribosomal RNA (rRNA) are the examples for ncRNA. Both these 2 RNA are involved in Translation, gene regulation, RNA processing and many other roles. RNAs involves in cutting andPasting other RNA molecules.

mRNA in Translation

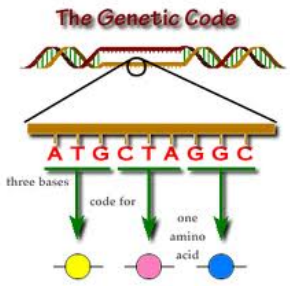
Messenger RNA carries information to theribosomes. It is mentioned in a coding sequence. Coding sequence is made up of 3 nucleotides (3 letter code). It is called as codon. Each codon represents to one amino acid.

In eukaryotes:

- Once precursor mRNA has been transcribed from DNA, it is processed to mature mRNA .
- The non-coding sections of the pre-mRNA have been removed. These non-coding regions are termed as introns.
- Then the mRNA reaches the cytoplasm and attached with ribosomes and translated into protein.
- This process is done with the help of tRNA.

In prokaryotes:

- No nucleus and cytoplasm compartments.
- mRNA attached to ribosome while it is being transcribed from DNA.
- The message degrades into nucleotides with the help ofribonucleases.



Transfer RNA

Transfer RNA is a small RNA chain with approximately 80nucleotides that transfers a specific amino acid to a growingpolypeptide chain at the ribosomal site of protein synthesis during translation. It hasanticodon region in which the codons will be attached and make a bond.

Ribosomal RNA

Ribosomal RNA is the catalytic component of the ribosomes. It has four different rRNA molecules. They are 18S, 5.8S, 28S and 5S rRNA. Nucleolus synthesizes 3 of the molecules. rRNA combines with protein combine and form a nucleoprotein. This nucleoprotein is commonly known as ribosomes.

Want to know more about RNA Translation process?Click here to schedule live online session with e Tutor!

About eAge Tutoring:

eAgeTutor.com is the premium online tutoring provider. Using materials developed by highly qualified educators and leading content developers, a team of top-notch software experts, and a group of passionate educators, eAgeTutor works to ensure the success and satisfaction of all of its students.

Contact us today to learn more about our tutoring programs and discuss how we can help make the dreams of the student in your life come true!

Reference Links:

- http://en.wikipedia.org/wiki/RNA
- http://www.elmhurst.edu/~chm/vchembook/583rnatypes.html
- http://www.angelfire.com/dc/apgenetics/rna.htm

Category:ROOT

Joomla SEF URLs by Artio