ORHS BIOLOGY Protein Synthesis VOCABULARY

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DOC #: V-5

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| --- | --- | --- | --- |
| RNA (229) | MESSENGER RNA (230) | TRANSFER RNA (230) | RIBOSOMAL RNA (230) |
| Definition: | Definition: | Definition: | Definition: |
| [http://cronodon.com/images/RNA_structure.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCNKPnY3i08gCFUGYgAodw3EC7g&url=http://cronodon.com/BioTech/Ribosomes.html&psig=AFQjCNFg_8ZP5KTk9ohcVeyk9F2bLzRaZw&ust=1445523844312442) |  | [https://www.genome.gov/dmd/previews/85250_large.jpg](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCLqYjrXj08gCFYyrgAodNE8OEQ&url=https://www.genome.gov/dmd/img.cfm?node%3DPhotos/Graphics%26id%3D85250&bvm=bv.105454873,d.eXY&psig=AFQjCNGOmYyBTJMYPAlOVJY5IBZNlVuSDQ&ust=1445524196943083) |  |
| TRANSCRIPTION (230) | URACIL | RIBOSOME (76) | RIBOSE |
| Definition: | In RNA, the base thymine is replaced with the base URACIL. Uracil will bond with Adenine in RNA. | Definition: | The sugar that makes up RNA nucleotides (instead of Deoxyribose in DNA) |
|  | [http://www.biology.iupui.edu/biocourses/N100H/images/13uracil.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCOz11afl08gCFczVgAod7mMNpA&url=http://www.biology.iupui.edu/biocourses/N100H/ch13dogma.html&bvm=bv.105454873,d.eXY&psig=AFQjCNEbkj_BziSwFzs94tJyxyVPREVNIA&ust=1445524704354565) | [http://cellsorganelles.weebly.com/uploads/1/3/8/0/13802066/3723328_orig.png?233](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCLzuvfvr08gCFYGqgAodp9IGoA&url=http://cellsorganelles.weebly.com/packaging-shipping-and-producing.html&bvm=bv.105454873,d.eXY&psig=AFQjCNFSDijfF9niYcturl_GypgTPESK8g&ust=1445526448500559) | [http://faculty.southwest.tn.edu/rburkett/GB%20org16.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCIa8orjs08gCFcmNDQod4BkEmw&url=http://faculty.southwest.tn.edu/rburkett/GB%20organic%20chem.htm&bvm=bv.105454873,d.eXY&psig=AFQjCNFmHuG4-wDakG2Kn75Nj4eJ_W0O7g&ust=1445526611423339) |
| AMINO ACID (49) | PEPTIDE BOND | PROTEIN (49) | CODON (233) |
| Definition: | The bond formed between two amino acids when making a polypeptide or protein | Definition: | Definition: |
| [http://www.kcse-online.info/schools/science/add_edex_bio_amino.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCLy28tfx08gCFcTNgAodJ2EFow&url=http://www.kcse-online.info/schools/science/page391.htm&bvm=bv.105454873,d.eXY&psig=AFQjCNGA2w8f5266xQx44MQUq8pZTlq2Ng&ust=1445528005751272) | [http://www.schenectady.k12.ny.us/putman/biology/data/images/translation/peptbond.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCNHZvozy08gCFcqQDQodDesELA&url=http://www.schenectady.k12.ny.us/putman/biology/data/translation/pepb.html&bvm=bv.105454873,d.eXY&psig=AFQjCNEkU0WHLqVU6d-ykIL8MhQ8z5O42g&ust=1445528132640292) | [https://s-media-cache-ak0.pinimg.com/originals/4e/11/26/4e11267635767422b14f365fb089a54a.jpg](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCMrvh8Dy08gCFYWYgAodOsMJ9w&url=https://www.pinterest.com/pin/444378688206139403/&bvm=bv.105454873,d.eXY&psig=AFQjCNHCz6vXYJzoW26wTcjFS0qeLuF8qg&ust=1445528184913572)  **PROTEIN** | [http://evolution.berkeley.edu/admin/media/2/5600_evo_resources_resource_image_284_small.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCM3JvP7y08gCFQifgAodp7sBwQ&url=http://evolution.berkeley.edu/evolibrary/search/imagelibrary.php?id%3D284%26topic_id%3D%26keywords%3Dcodon&bvm=bv.105454873,d.eXY&psig=AFQjCNH1iLbgubVxqAPDdoqnL_Of-W8l4g&ust=1445528377382873) |
| TRANSLATION (233) | ANTI-CODON (235) | MUTATION (244) | POINT MUTATION (244) |
| Definition: | Definition: | Definition: | Definition: |
| [http://www.biologycorner.com/resources/translation01.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCOq3_pjz08gCFYzRgAodcywPRw&url=http://www.biologycorner.com/bio2/genetics/notes_transcription_translation.html&bvm=bv.105454873,d.eXY&psig=AFQjCNHch1Oroy1Jqim9HqLna6HZRKY16w&ust=1445528428341415) |  | [http://translatingscience.pbworks.com/f/1271627118/Mutations_chart.jpg](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCM-ZvKX208gCFcHtgAodM3oHCg&url=https://www.emaze.com/@AOZQZQLF/heredity&psig=AFQjCNFbIurv04TjrSQxyGqzOtmppRK7YA&ust=1445529236917221) | **Normal:**  THE CAT RAN FAR  **Mutation:**  THE RAT RAN FAR |
| SILENT MUTATION | INSERTION MUTATION | DELETION MUTATION | FRAMESHIFT MUTATION (244) |
| A point mutation that changes a single DNA base without changing the amino acid coded for- the mutation has no impact on the organism | A type of frameshift mutation where one or more nucleotides are ADDED, disrupting all amino acids after the mutation | A type of frameshift mutation where one or more nucleotides are REMOVED, disrupting all amino acids after the mutation | Definition: |
| [http://study.com/cimages/multimages/16/silent-mutation.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCJmVn_D208gCFcnMgAodjNYBlw&url=http://study.com/academy/lesson/effects-of-mutations-on-protein-function-frameshift-silent-nonsense-missense-mutations.html&psig=AFQjCNHqV0-WKXnotXAnThGVVTZfmkiNfg&ust=1445529406466271) | **Normal:**  THE CAT RAN FAR  **Mutation:**  THE CAT BRA NFA R | **Normal:**  THE CAT RAN FAR  **Mutation:**  THE CAT RAF AR | [http://www.esciencecentral.org/journals/IJGMimages/2332-0672-1-108-g001.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCOzJscaP1MgCFYHUgAodAOgETA&url=http://www.esciencecentral.org/journals/mitochondrial-genomes-and-frameshift-mutations-hidden-stop-codons-their-functional-consequences-and-disease-associations--2332-0672.1000108.php?aid%3D18842&bvm=bv.105454873,bs.1,d.eXY&psig=AFQjCNF9wYMFu75Ojy89KK_P4erRcEGUgw&ust=1445536036473140) |
| HELICASE | **RNA** POLYMERASE (230) | LIGASE | GYRASE |
| The first enzyme in transcription that unzips the double helix by breaking the hydrogen bonds between base pairs. |  | Enzyme that ‘Seals’ the original DNA strand back together following transcription | Causes the DNA strand to twist or wind back into a double helix after transcription |
| http://study.com/cimages/multimages/16/dna-helicase.jpg*Helen the Homewrecker* | [http://hyperphysics.phy-astr.gsu.edu/hbase/organic/imgorg/transcbub3.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCO3Y1uKO1MgCFUuhgAodh3MMRA&url=http://hyperphysics.phy-astr.gsu.edu/hbase/organic/transcription.html&psig=AFQjCNGtskXkjTN0eaL7H6fSH2dCVbHWKw&ust=1445535810348194)*RHONDA the Date Matchmaker* | *Lisa the Love Spell*  http://study.com/cimages/multimages/16/ligase.jpg | *Gina*  *the Gymnast*  http://cliffsnotescms-v1.prd.techspa.com/assets/24349.jpg |