Codon Overview

Codons, condoms, are the fundamental reading unit of mRNA for protein translation. The mRNA is read in three nucleotide chunks, mail-rhino putting mail into 3 tree with nuclear toad, which are determined based on the reading frame set by the first start codon. AUG is the start codon, AUG in Green Condom, and has a matching tRNA anticodon, transformer rhino with its Ant-Tie matching condom. The anticodon is the complementary RNA sequence on a tRNA that is attached to the appropriate amino acid. Thus, each codon is specific to one amino acid, Green Condom matches Amigo Lemon with Green hat. For example, AUG codes for methionine, Met shirt worn by amigo lemon, and will never code for any other amino acid. However, multiple codons may code for the same result. UAA, UAG, and UGA are all termination codons, portrayed by Umbrella-Apple-Apple, Umbrella-Apple-Gold, and Umbrella-Gold-Apple on stop sign condom.

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Characteristics

mRNA Read in Three Nucleotide Chunks
Mail-(RNA)-rhino putting mail into (3) Tree Nuclear-toad
mRNA is read in sets of three nucleotides (codons) within the reading frame, which is established by the first start codon (usually AUG).

AUG is Start Codon
AUG in Green Condom
AUG is the primary start codon in eukaryotes, signaling the ribosome to begin synthesizing the polypeptide chain. In prokaryotic and mitochondrial genomes, alternative start codons (such as GUG and UUG) may also be used.

Matching tRNA Anticodon
transformer-Rhino with its Ant-tie matching Condom
tRNAs (transfer RNAs) have complementary sequences to mRNA codons, called anticodons. Each tRNA pairs with its specific codon during translation to ensure the correct amino acid is added to the growing polypeptide chain.

Amino Acid Specific (To Codon)
Green Condom matches A-mean-ol' Acidic-lemon with Green hat
Each codon (a three-nucleotide RNA sequence) specifies only one amino acid, but multiple codons can code for the same amino acid. For example, UCU codes for serine, and so do UCC, UCA, UCG, AGU, and AGC.

AUG Codes for Methionine
MET-shirt worn by A-mean-ol' Acidic-lemon
AUG, the start codon, always codes for methionine in eukaryotes and N-formylmethionine (fMet) in prokaryotes, where it serves as the initiating amino acid in translation.

UAA, UAG And UGA are Termination Codons
(UAA) Umbrella-Apple-Apple, (UAG) Umbrella-Apple-Gold, and (UGA) Umbrella-Gold-Apple on Stop Sign-Condom
There are three stop codons (UAG, UGA, and UAA) that signal the end of protein synthesis and the termination of translation. These codons promote the binding of release factors, which cause the ribosomal subunits to dissociate and release the newly synthesized polypeptide.