

Describe the initiation, elongation and termination process in protein translation.

During initiation, small _____ subunit bind to 5' end of mRNA where start codon is presence. _____ carries Met bind to start codon on mRNA. Large _____ subunit bind to small ribosomal subunit and form _____ **initiation** complex. Aminoacyl-tRNA carries Met occupied the _____ site of ribosome.

Elongation of translation has three stages which are _____ recognition, formation of _____ bond and _____.

In codon recognition stage, codon in _____ site is recognised by complementary anticodon of _____. Aminoacyl-tRNA binds to _____ in A site. _____ bonds form between complementary base pairing of tRNA's _____ and the mRNA's codon.

In formation of peptide bond stage, _____ bond formed between carboxyl terminal of _____ attached to tRNA at P-site and amino terminal of _____ attached to tRNA at A site. The growing polypeptide chain is attached to tRNA at _____ site.

In translocation stage, as _____ moves one codon ahead, the empty tRNA at _____ site is translocated to _____ site, then exit. The tRNA attached to growing polypeptide chain in the _____ site is translocated to the _____ site. Bringing the next codon to occupy _____ site and can be recognised by complementary anticodon of _____.

The three stages of _____ is repeated until the termination occurs.

Termination occurs when _____ codon occupies _____ site. A _____ protein enter _____ site, and hydrolyse the ester bond between _____ chain and tRNA at _____ site. Polypeptide chain is released. The release factor also give a signal for the tRNA, large and small ribosomal subunit and mRNA to detach.