

Inhibitors of Translation

Streptomycin → ^{bind} 30S subunit cause mis-reading of m.RNA.

Chloramphenicol → 50S subunit
↳ and inhibit peptide bond formation.

Tetracyclin → 30S subunit → inhibit the binding of t.RNA at A sit.

Erythromycin \rightarrow 50S
 \hookrightarrow inhibit peptide chain elongation.

Cyclohexamide \rightarrow 60S subunit

This inhibit the peptidyl Transferase
activity.

50S \rightarrow 23S + 5S + Protein
 \downarrow
23S rRNA

60S \rightarrow 28S rRNA
 \uparrow
 \rightarrow 28S + 5S + 5.8S

Gene Regulation

Constitutive genes → They are expressed all the time in cell. They are also all house keeping genes.

Regulatory genes / Inducible / Repressible
↓

Operon Model - Formulated by Jacob & Monod in 1961.

An operon is the unit of bacterial gene expression & regulation which include structural genes and regulatory sequences. All the genes in an operon is expressed as single transcriptional unit. The single promoter is required to initiate and regulate the transcription of all structural genes.

Lac Operon → (Inducible Gene)

* IPTG
↳ analog of Lactose.

