

1) Presence of lactose



lacRepressor



+ Allolactose



(repressor cannot bind to lacO so transcription occurs normally) Producing β -galactosidase, permease, + Acetylase)

This regulation is occurring in Transcription of the lac Operon of E. Coli

2) absence of lactose



lacRepressor

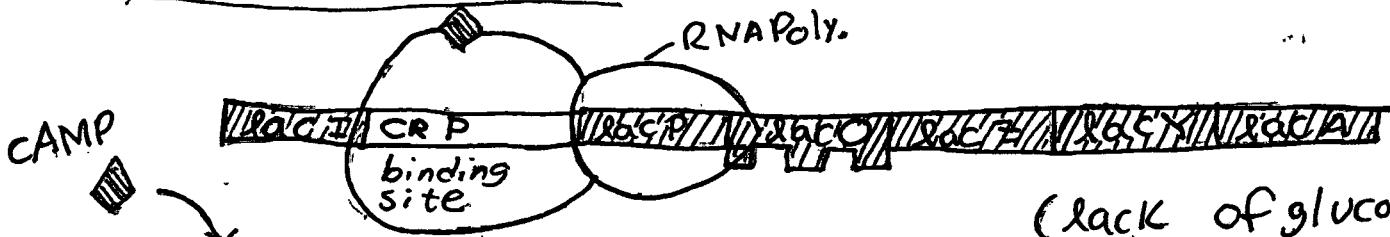


+ Allolactose



(repressor binds to lacO so transcription does not occur)

3) absence of glucose



(lack of glucose increases CAMP. CAMP binds w/CRP. This causes transcription to occur faster)