



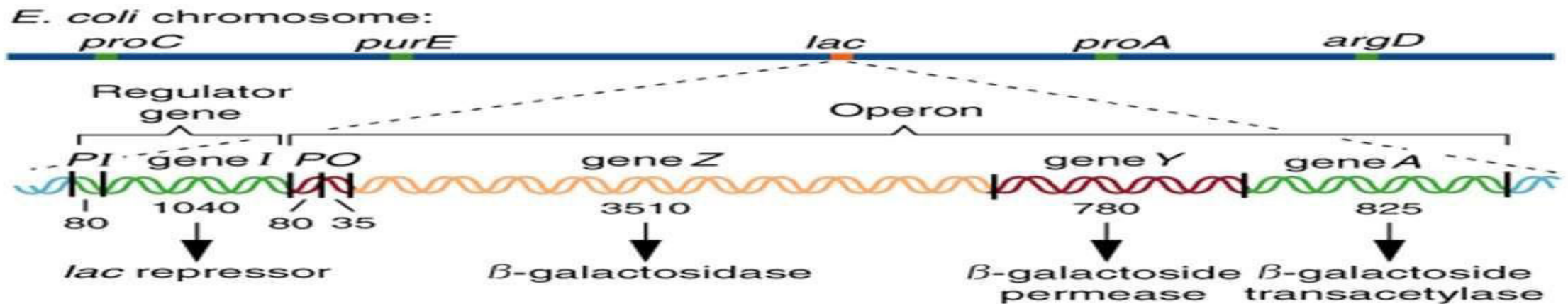
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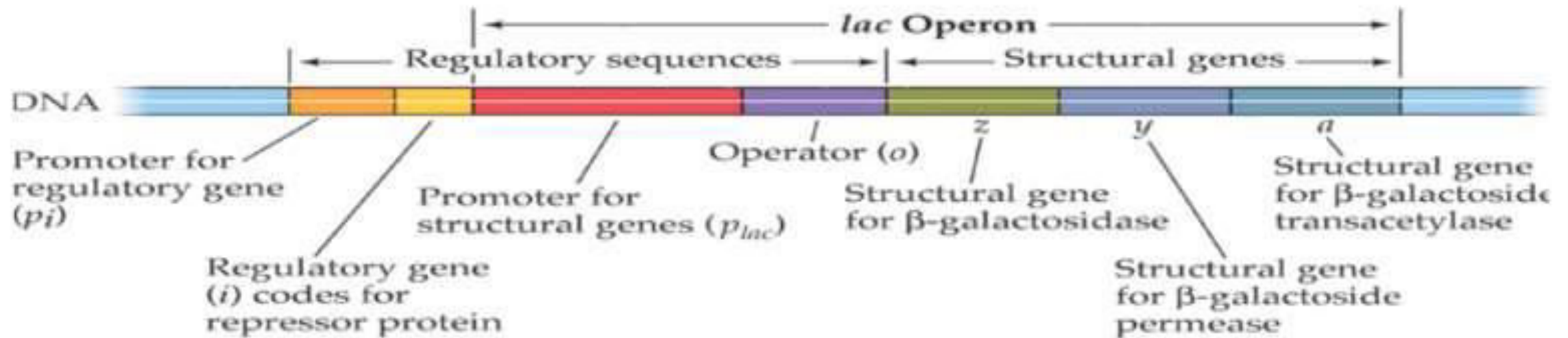
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FACULTY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Lac Operon

- The lac operon of the model bacterium *Escherichia coli* was the first operon to be discovered and provides a typical example of operon function.
- It consists of three adjacent structural genes, a promoter, a terminator, and an operator.
- The lac operon is regulated by several factors including the availability of glucose and lactose.





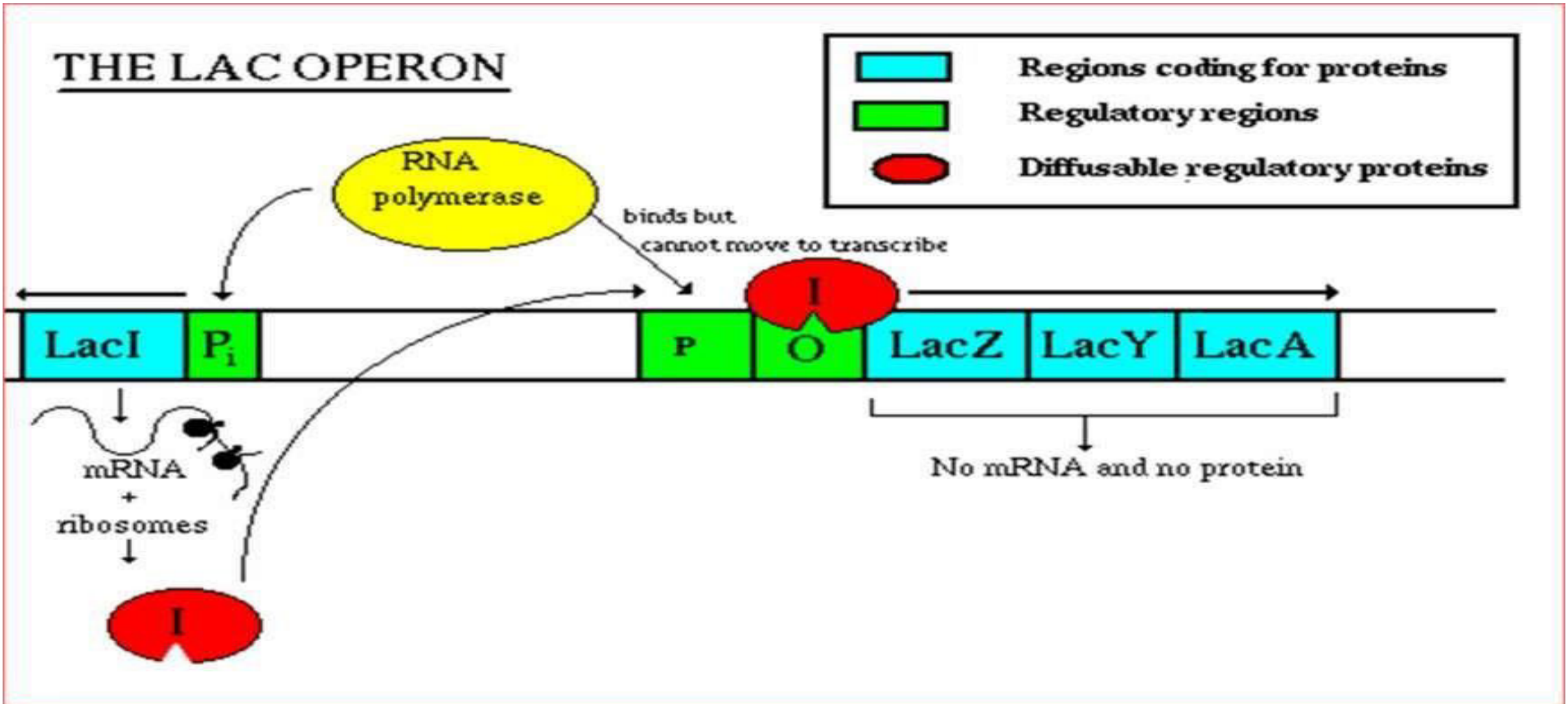
In the absence of lactose, the lac repressor binds the operator, and transcription is blocked.



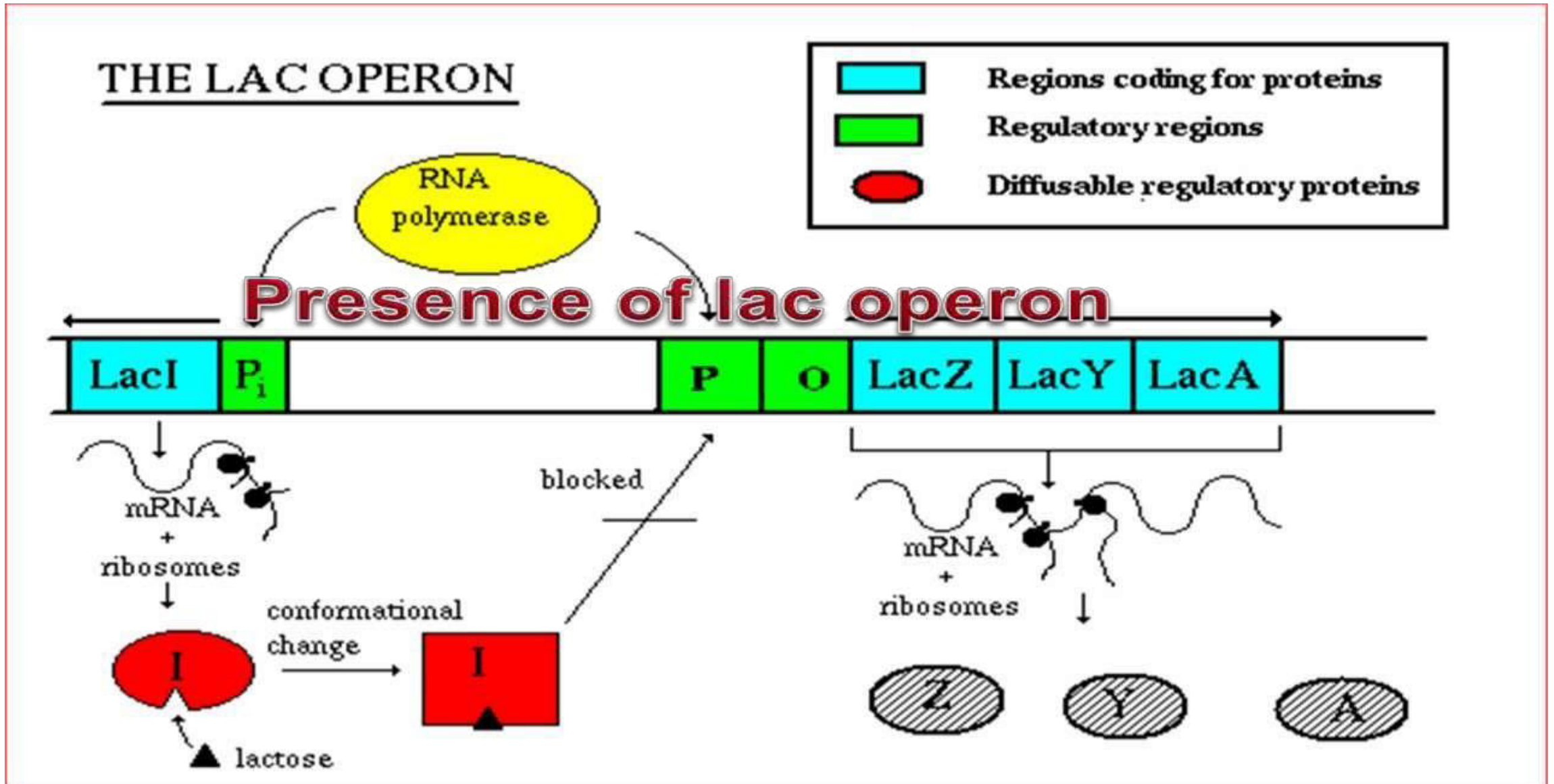
In the presence of lactose, the lac repressor is released from the operator, and transcription proceeds at a slow rate.



Absence of Lac Operon



Presence of Lac operon



The *lac* Operon

