Title

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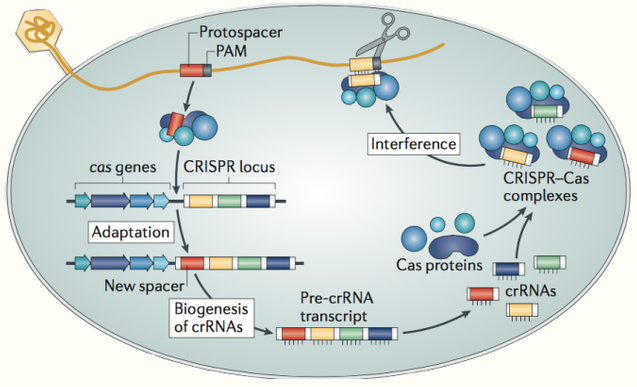

INTRODUCTION

The CRISPR-Cas system is a bacterial defence mechanism that target and cleave invading DNA. It functions in three stages: Adaptation, biogenesis of crRNA and interference. The summary of CRISPR-Cas system is depicted in figure on the left.

The direct repeats of CRISPR locus are separated by short non-repetitive spacers, which are DNA fragments acquired from invading DNA in ADAPTATION. These non-repetitive spacers are subsequently transcribed and processed into a collection of short CRISPR RNA (CRRNA). Each crRNA form CRISPR-Cas complexes with a set of Cas proteins and act as surveillance and defensive system.

INTERFERENCE happens when invading DNA that matches the sequence of crRNA occurs, CRISPR-Cas complex will cleave the invading DNA in sequence-specific manner.

9-class YlGnBu

HEX

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