

ModuleDefinition

CRISPR Genome Editing

ComponentDefinition

DNA-Based    CRISPR Target Site (miRNA Target Site, Blunt End Restriction Enzyme Cleavage Junction)

Interaction

CRISPR Cleavage (Cleavage)

Participants

- gRNA Binding Site (Modifier)
- Cas9 Cleavage Site (Modifier)
- CRISPR Complex (Enzymatic Catalyst)

ModuleDefinitions

gRNA Expression

ComponentDefinitions

- DNA-Based    U6 gRNA Expression Device (Gene)
- RNA-Based    gRNA (sgRNA) as Output

Interaction

gRNA Production (Genetic Production)

Participants

gRNA as Product

Cas9 Expression

ComponentDefinitions

- DNA-Based    T7 Cas9 Expression Device (Gene)
- Protein-Based    Cas9 (Endonuclease) as Output

Interaction

Cas9 Production (Genetic Production)

Participants

Cas9 as Product

CRISPR Complex Formation

ComponentDefinitions

- RNA-Based    gRNA (sgRNA) as Input
- Protein-Based    Cas9 (Endonuclease) as Input
- Complex-Based    CRISPR Complex (Endonuclease) as Output

ComponentDefinitions

- gRNA
- Cas9

Interaction

CRISPR Complex Formation (Non-Covalent Binding)

Participants

- gRNA as Reactant
- Cas9 as Reactant
- CRISPR Complex as Product

