Ribozyme | Catalytic centre | Notes
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Group I intron

[Diagram of Group I intron catalytic centre]

Mg\(^{2+}\) (M\(_A\)) functions as the general base and Mg\(^{2+}\) (M\(_B\)) as the general acid

Group II intron

[Diagram of Group II intron catalytic centre]

Mg\(^{2+}\) (M\(_A\)) functions as the general base and Mg\(^{2+}\) (M\(_B\)) as the general acid

Lariat capping ribozyme

[Diagram of Lariat capping ribozyme catalytic centre]

The 2’OH of the internal residue U232 makes a nucleophilic attack at the IPS

RNase P

[Diagram of RNase P catalytic centre]

Mg\(^{2+}\) (M1) serves to activate and position the nucleophile Mg\(^{2+}\) (M2) is involved in electrostatic stabilization of the transition state and activation of the leaving group

Spliceosome

[Diagram of Spliceosome catalytic centre]

Branching Reaction

Ligation Reaction

Ribosome

[Diagram of Ribosome catalytic centre]

The attack of the α-NH\(_2\) group on the ester carbonyl carbon results in a six-membered transition state