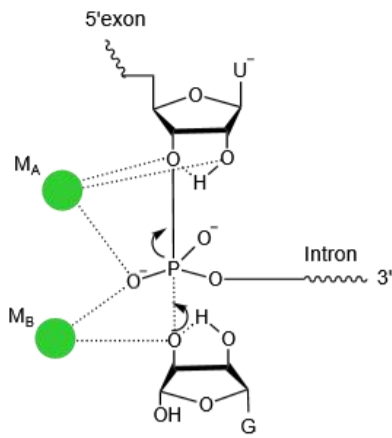


Ribozyme

Catalytic centre

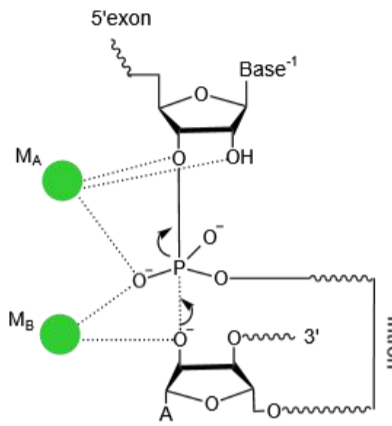
Notes

Group I intron



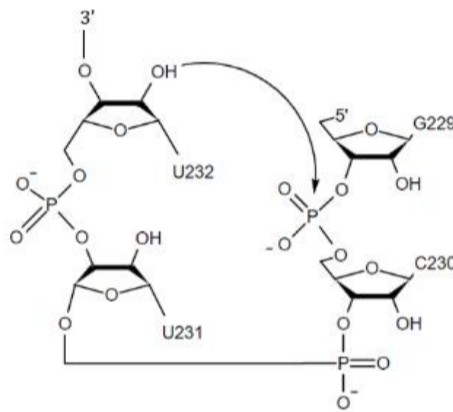
Mg²⁺ (M_A) functions as the general base and Mg²⁺ (M_B) as the general acid

Group II intron



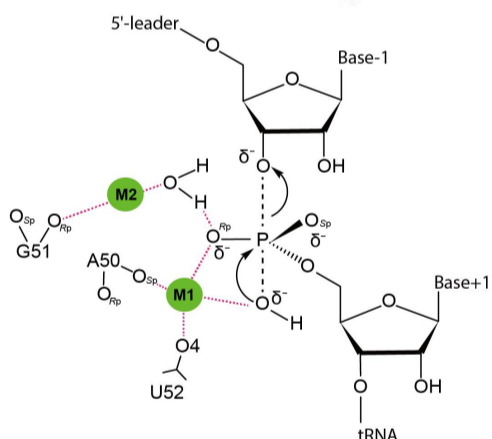
Mg²⁺ (M_A) functions as the general base and Mg²⁺ (M_B) as the general acid

Lariat capping ribozyme



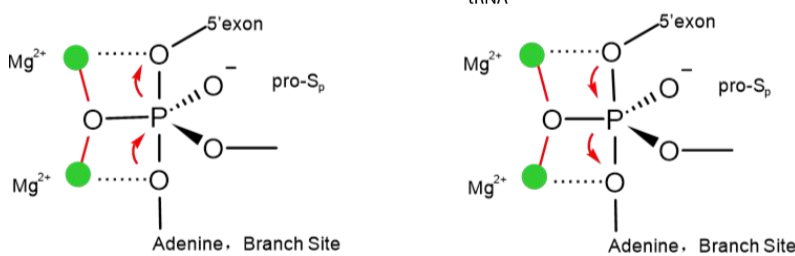
The 2'OH of the internal residue U232 makes a nucleophilic attack at the IPS

RNase P



Mg²⁺ (M1) serves to activate and position the nucleophile
Mg²⁺ (M2) is involved in electrostatic stabilization of the transition state and activation of the leaving group

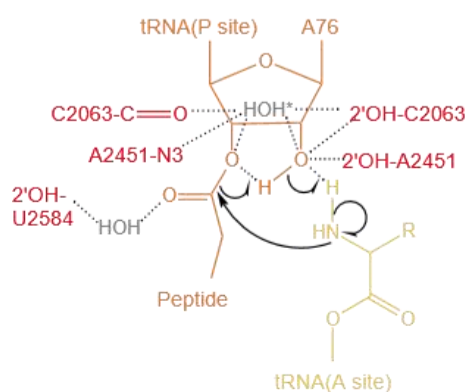
Spliceosome



Branching Reaction

Ligation Reaction

Ribosome



The attack of the α -NH₂ group on the ester carbonyl carbon results in a six-membered transition state