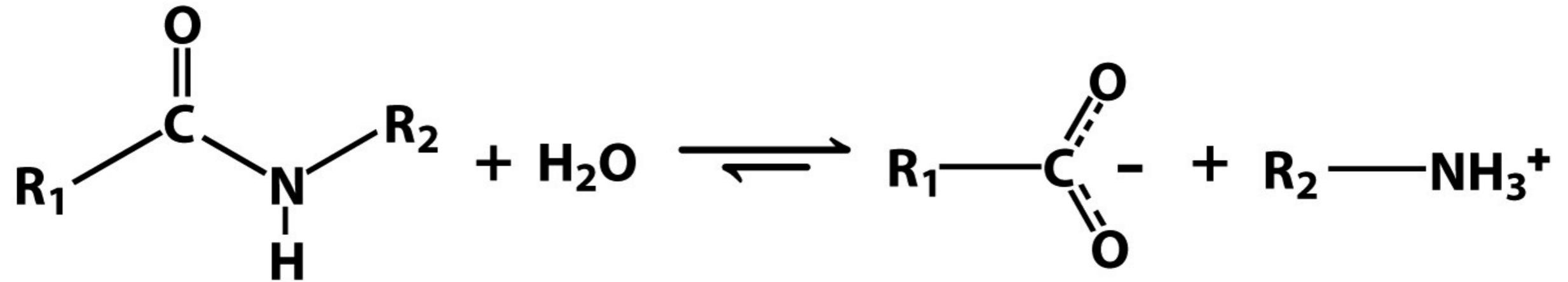
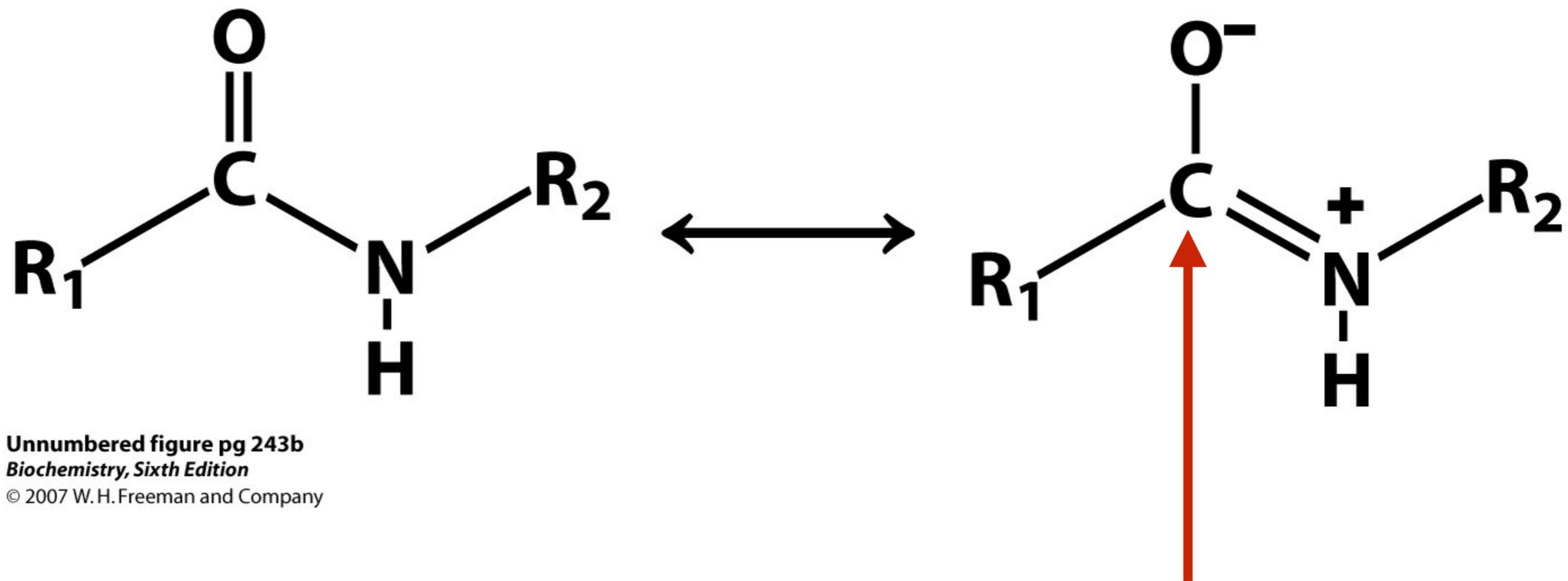


Proteases



Unnumbered figure pg 243a
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Unnumbered figure pg 243b
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**Pouco reativo
Sofre ataque nucleofílico**

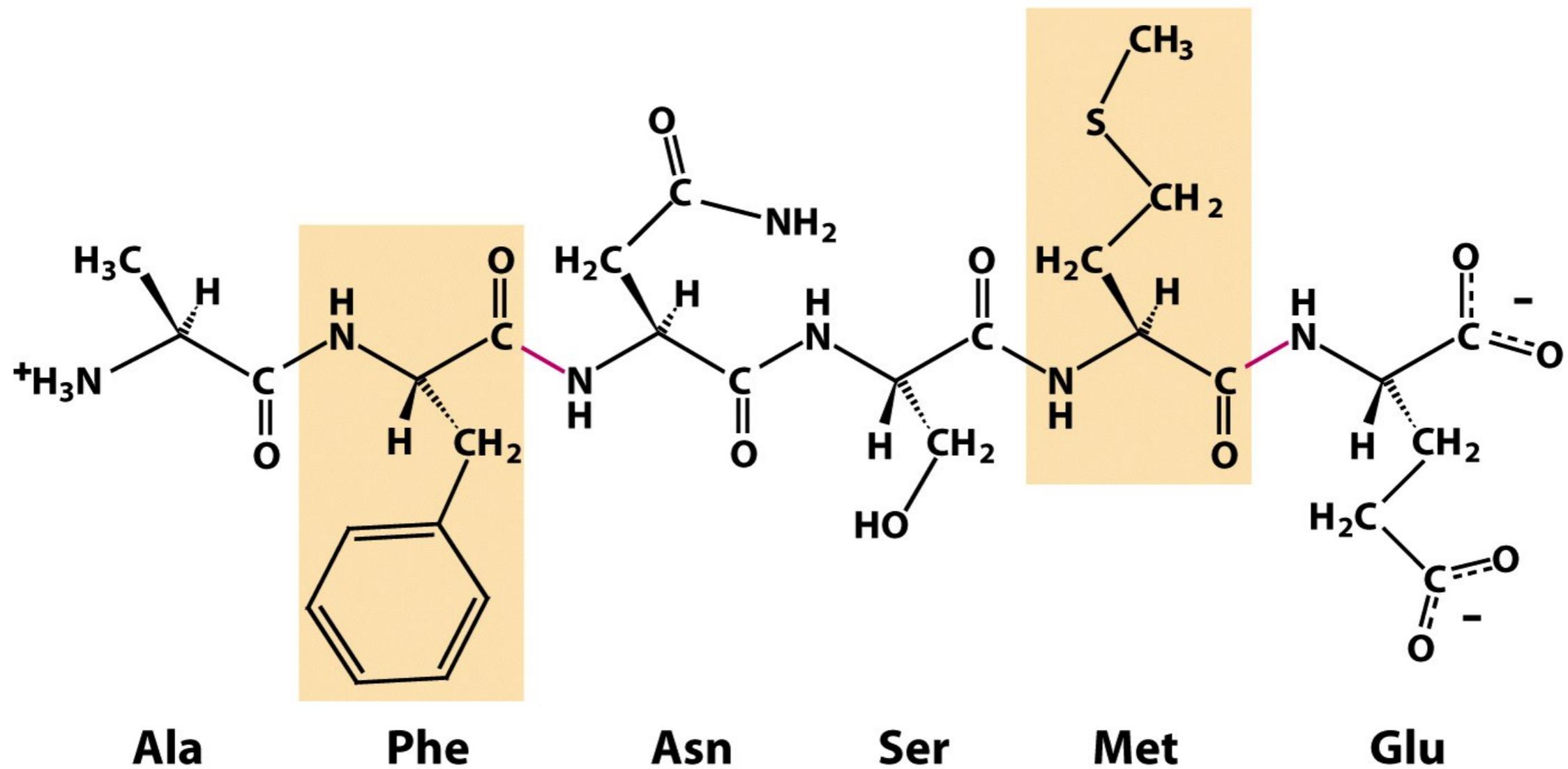
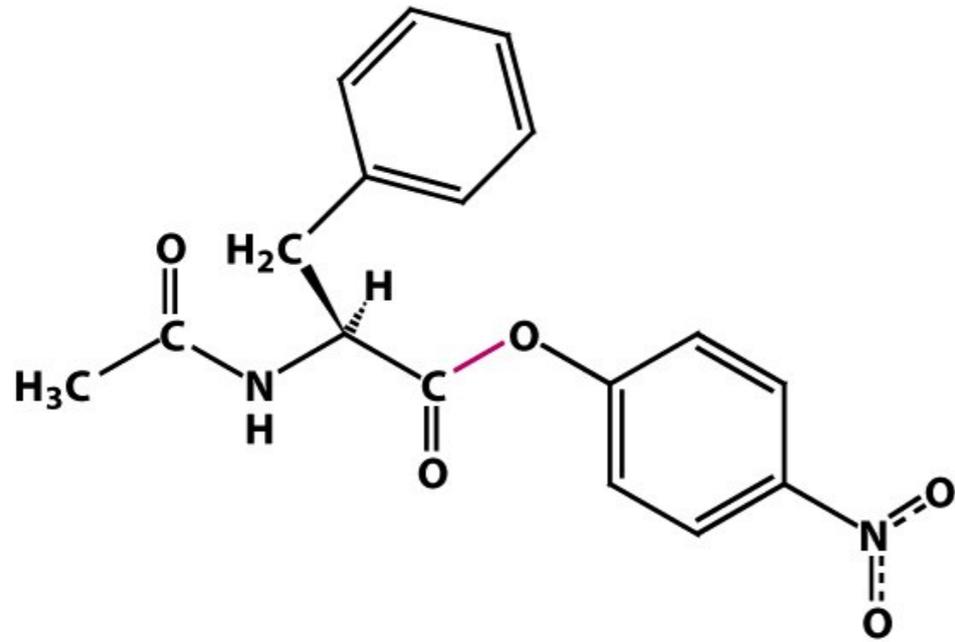
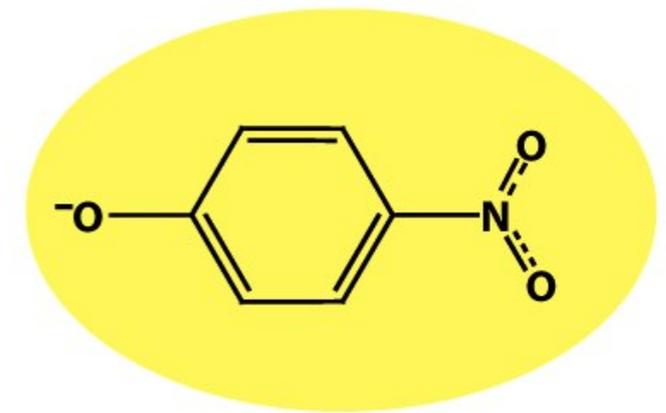
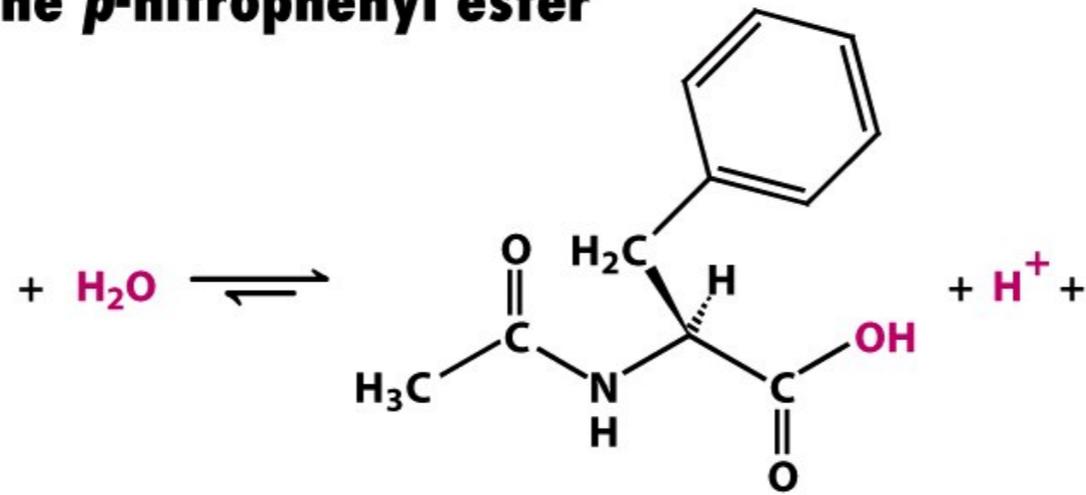


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Quimiotripsina: cliva a extremidade C-term de aminoácidos aromáticos ou de cadeias hidrofóbicas longas



***N*-Acetyl-L-phenylalanine *p*-nitrophenyl ester**



***p*-Nitrophenolate**

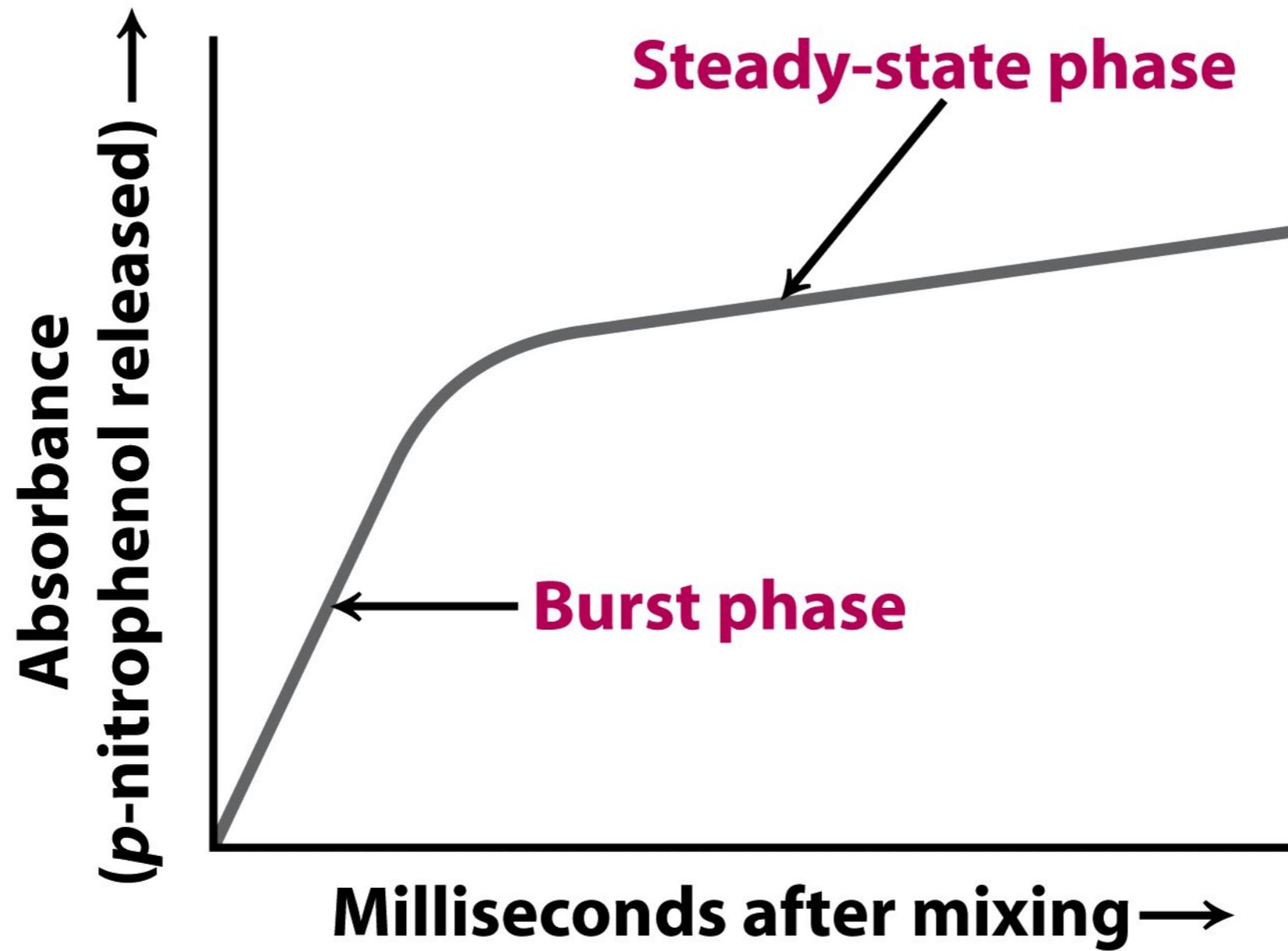


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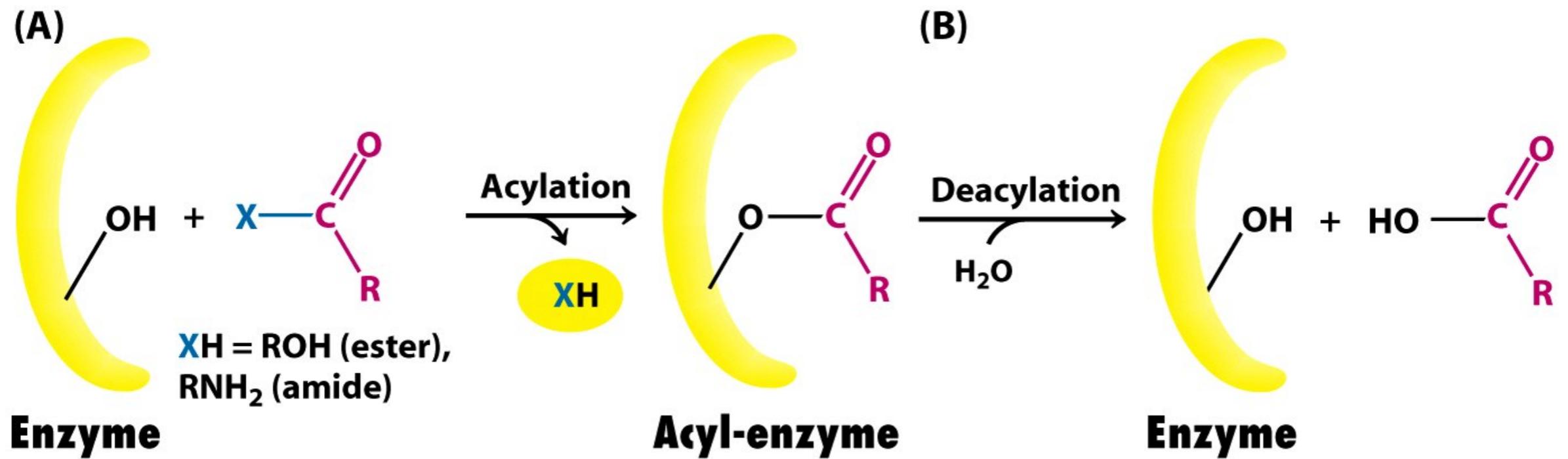


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Serine 195

Disulfide bonds

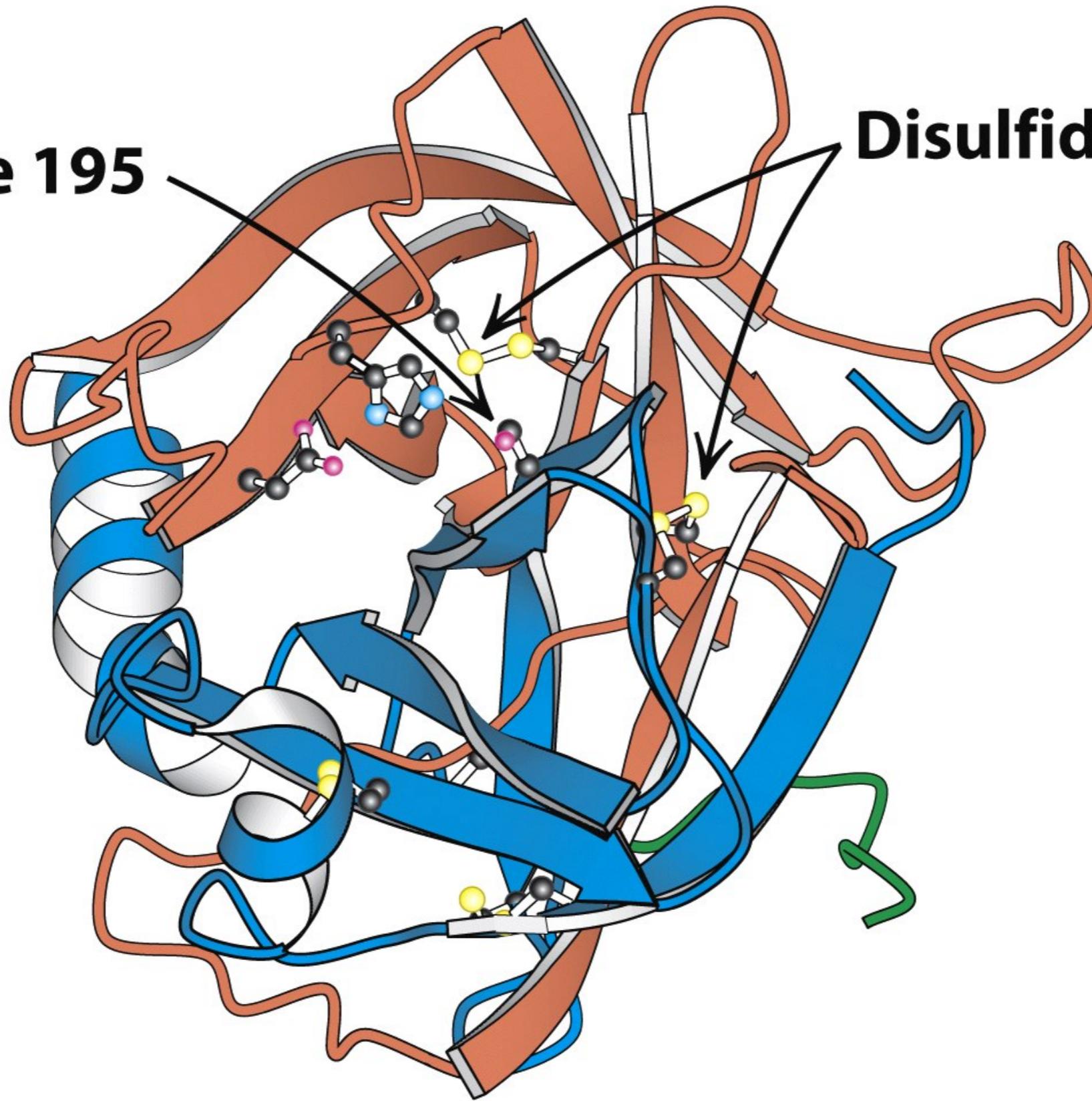


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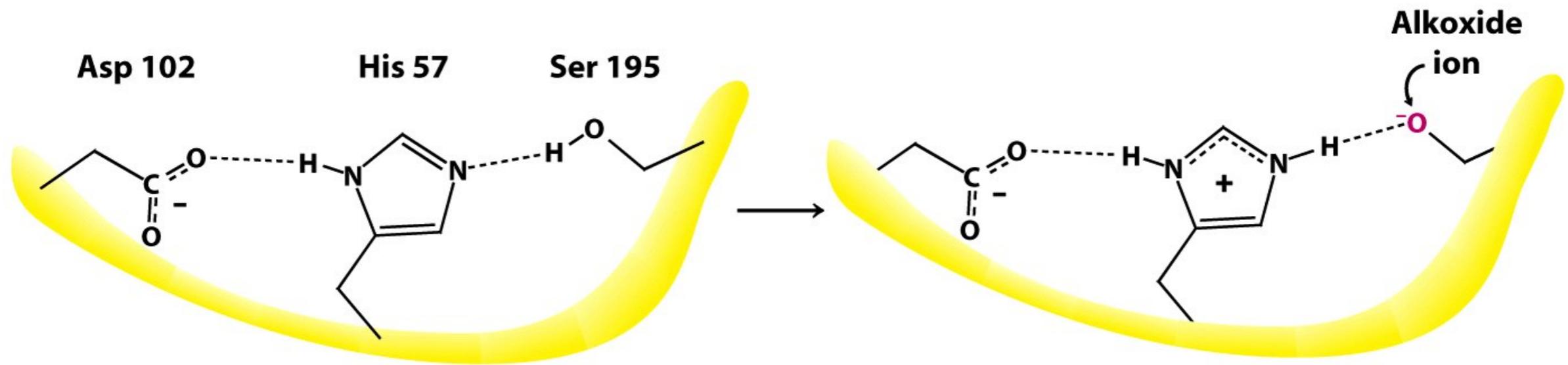


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A enzima estabiliza um intermediário da reação

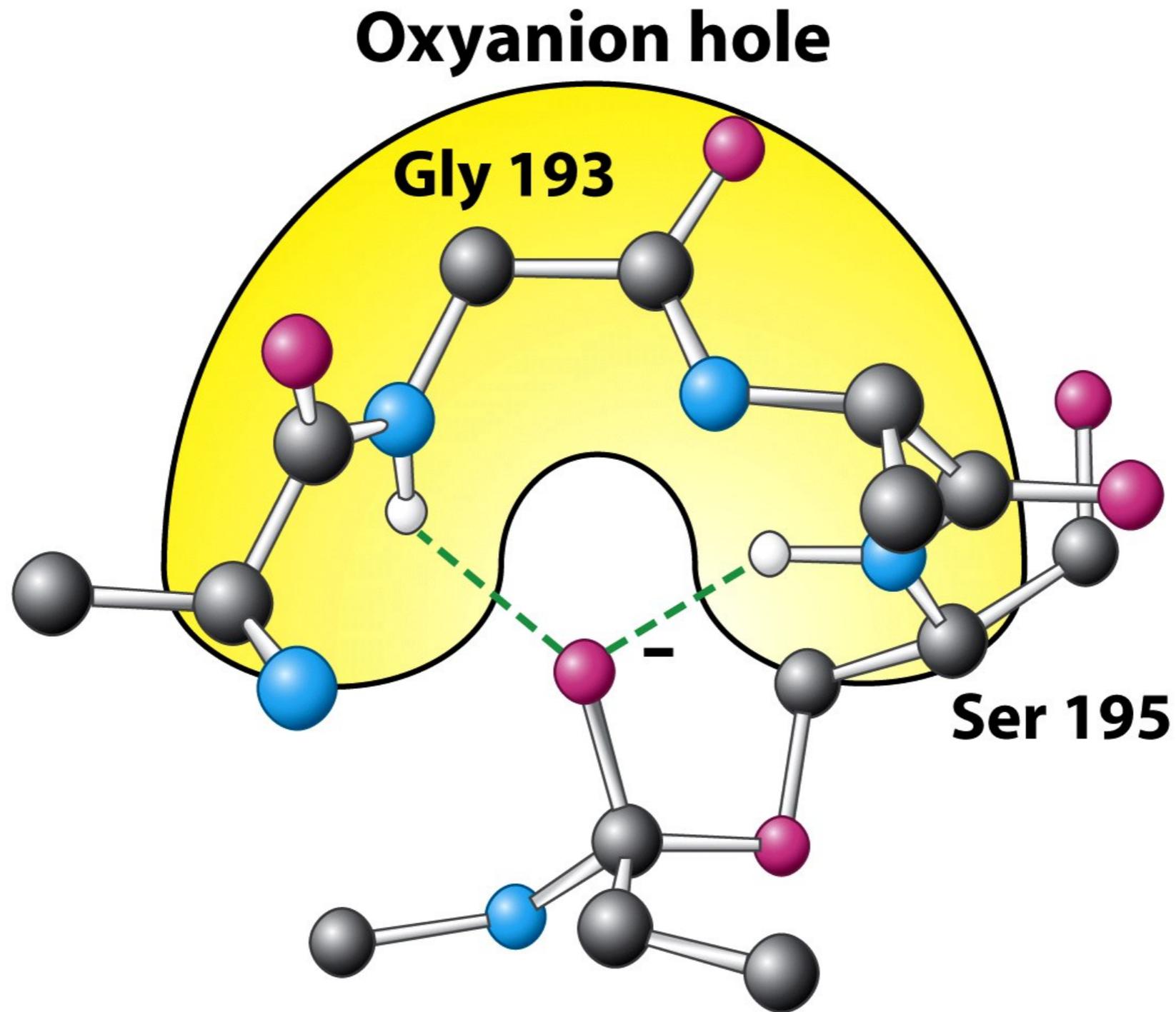


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Sítios específicos da enzima determinam a especificidade pelo substrato

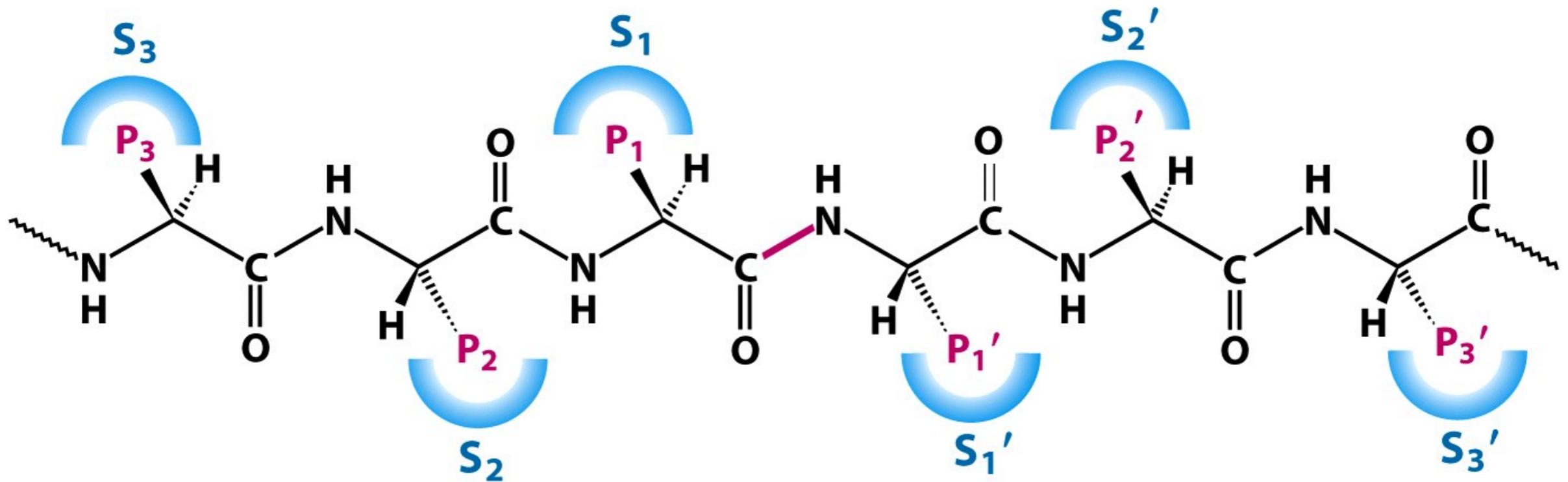


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Bolso hidrofóbico S1

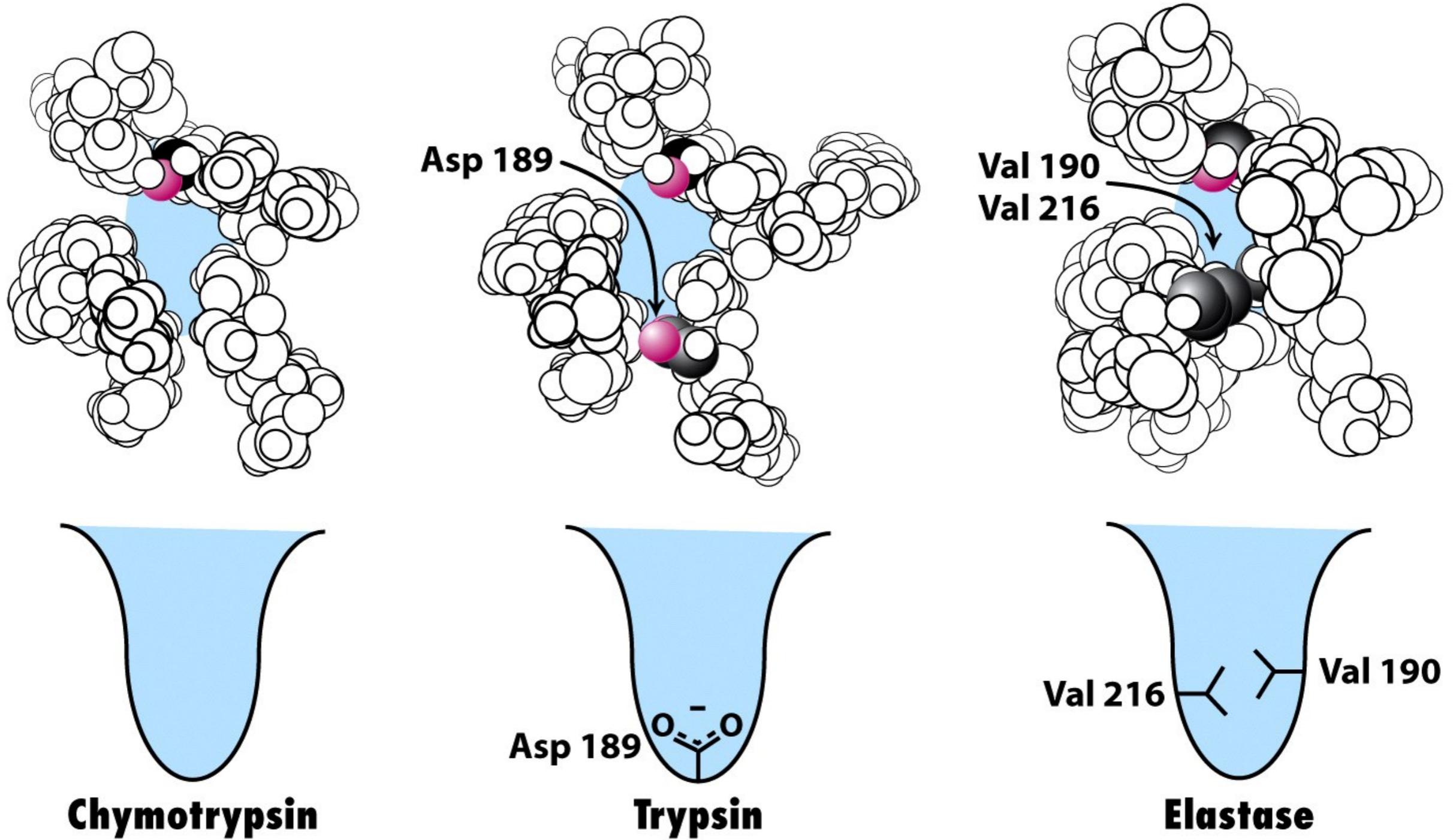


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Ensaio de mutagenesis sítio-dirigida permitem identificar aminoácidos da tríade catalítica

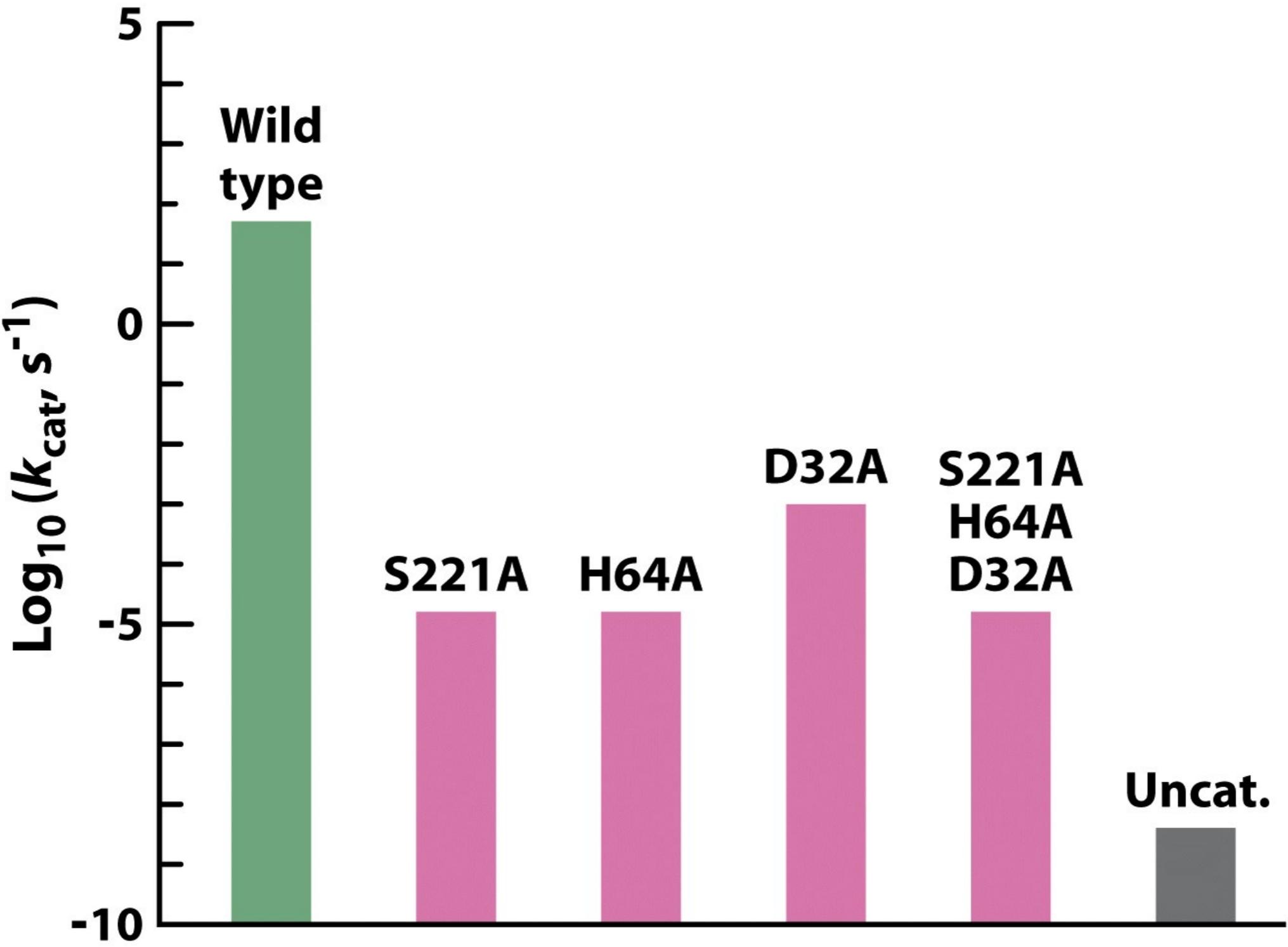


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A protease do HIV

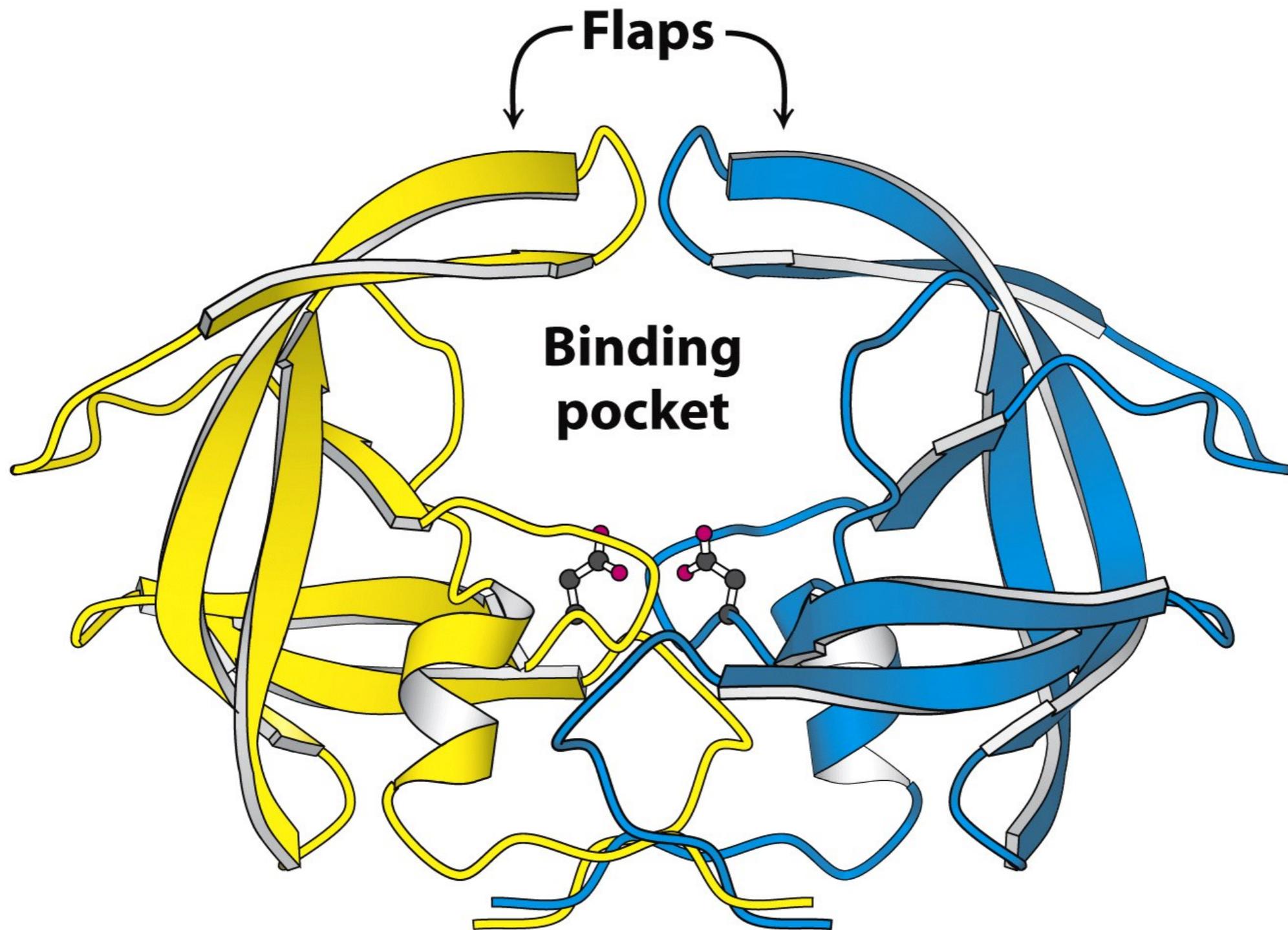
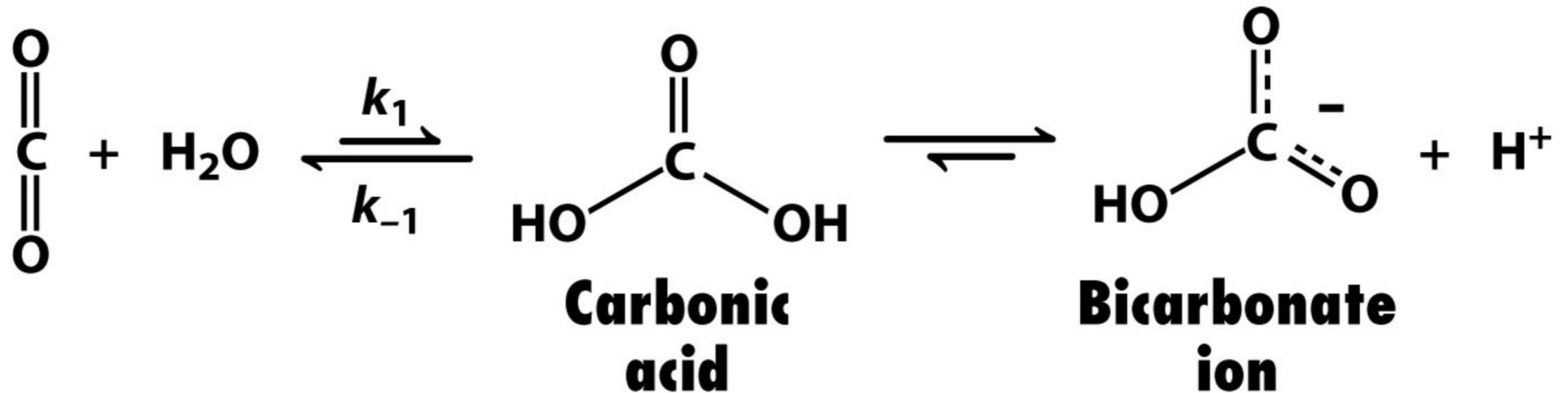


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A anidrase carbônica catalisa a hidratação de CO₂



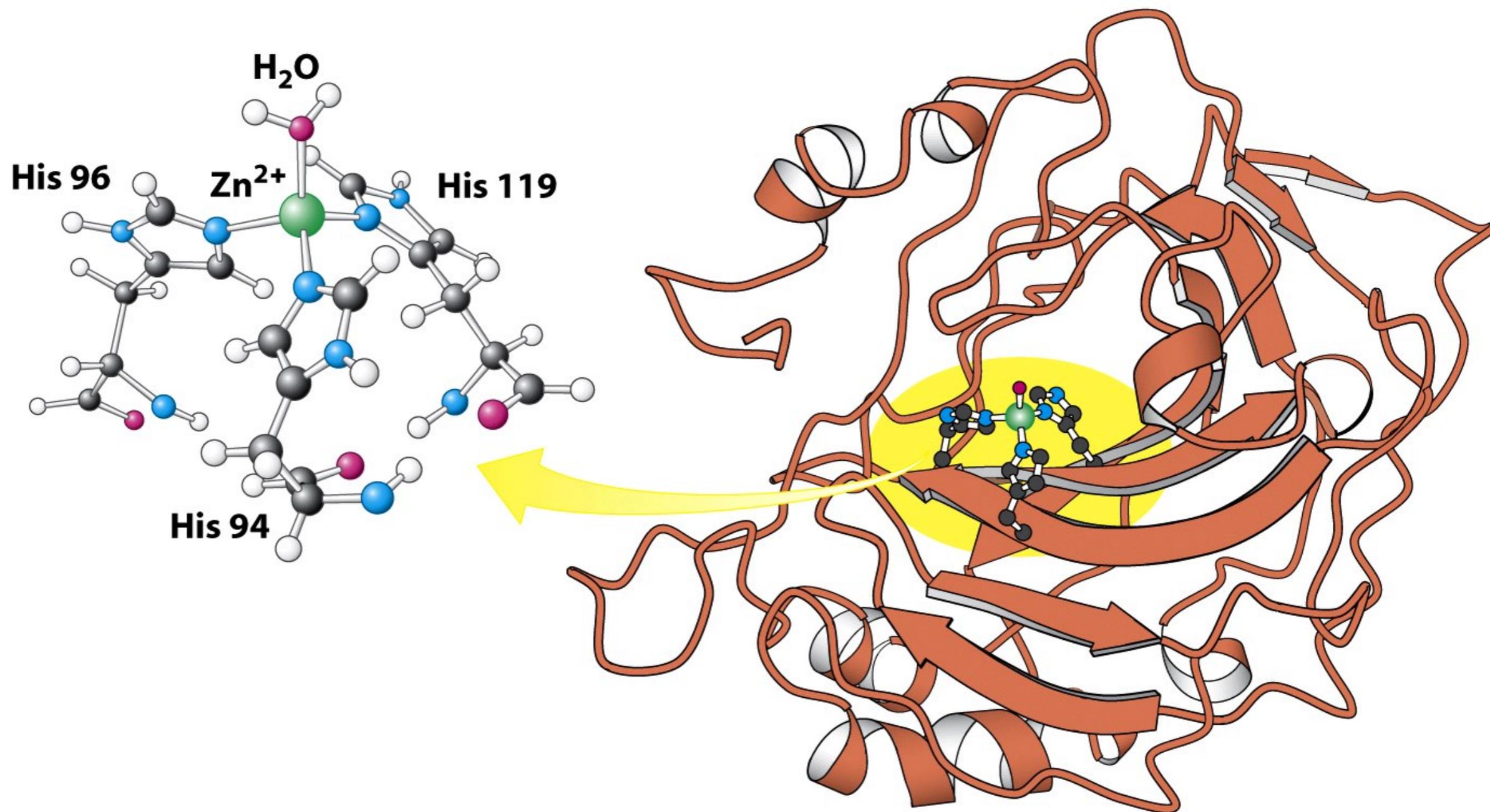


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Um grupo que perde um H⁺ é essencial para a catálise

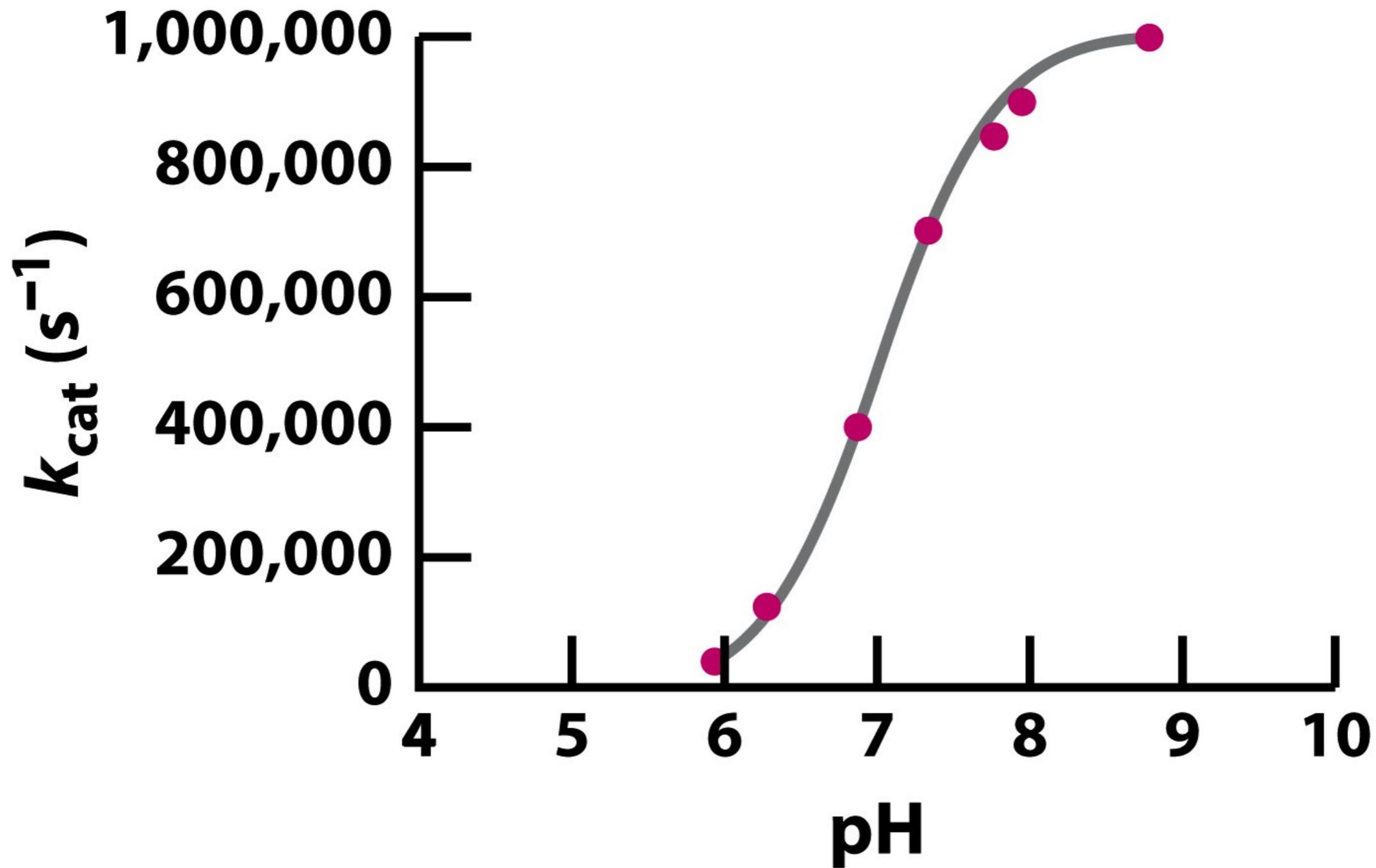


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Zn²⁺ ativa uma molécula de água, que forma um íon hidróxido

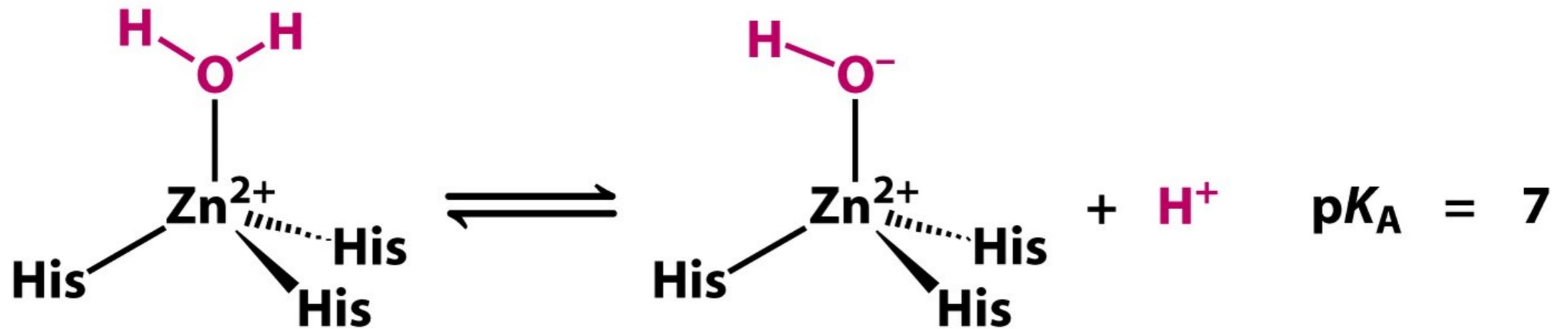


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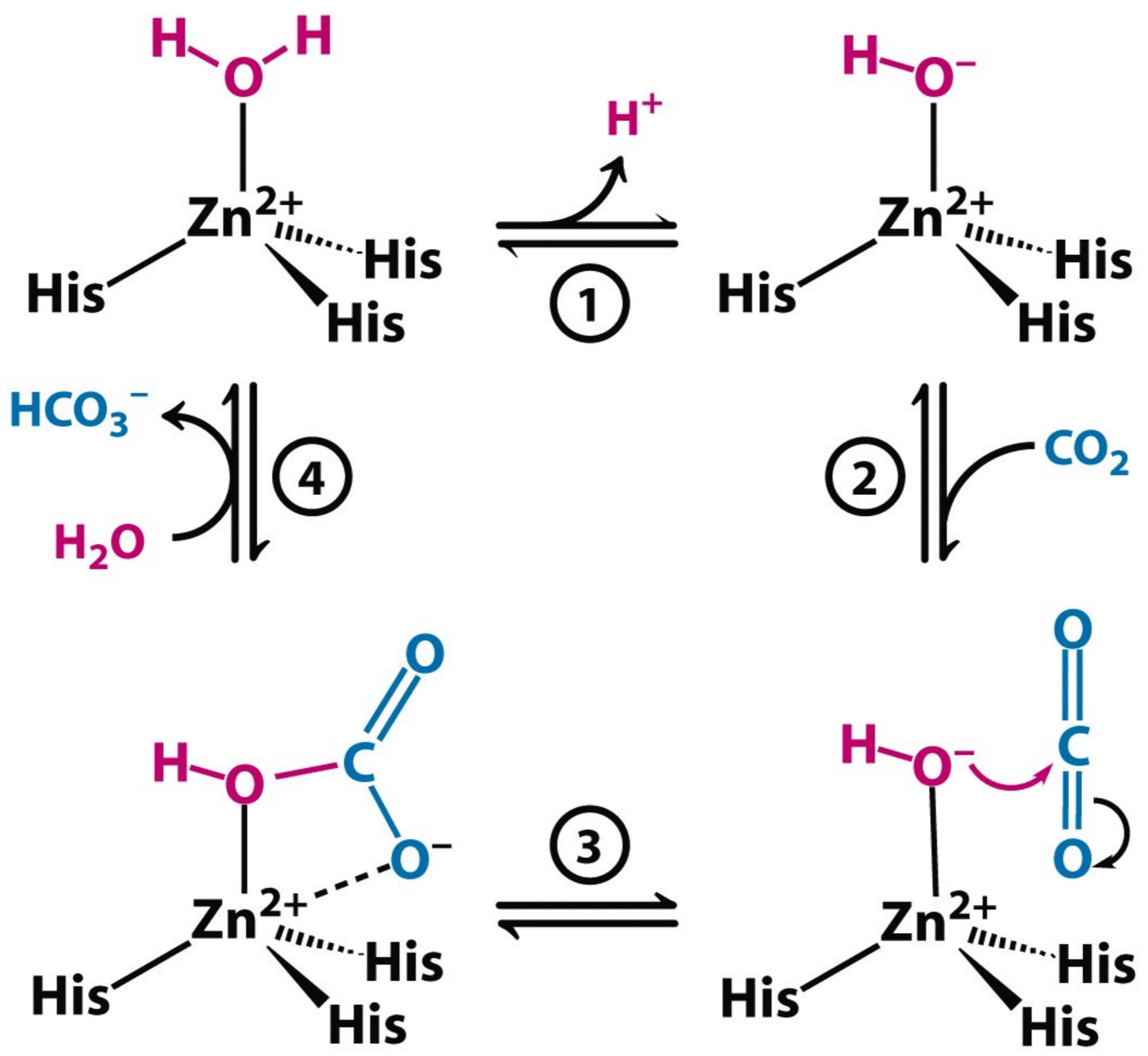


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Um modelo sintético da AC é capaz de acelerar 100x a reação de hidratação de CO₂

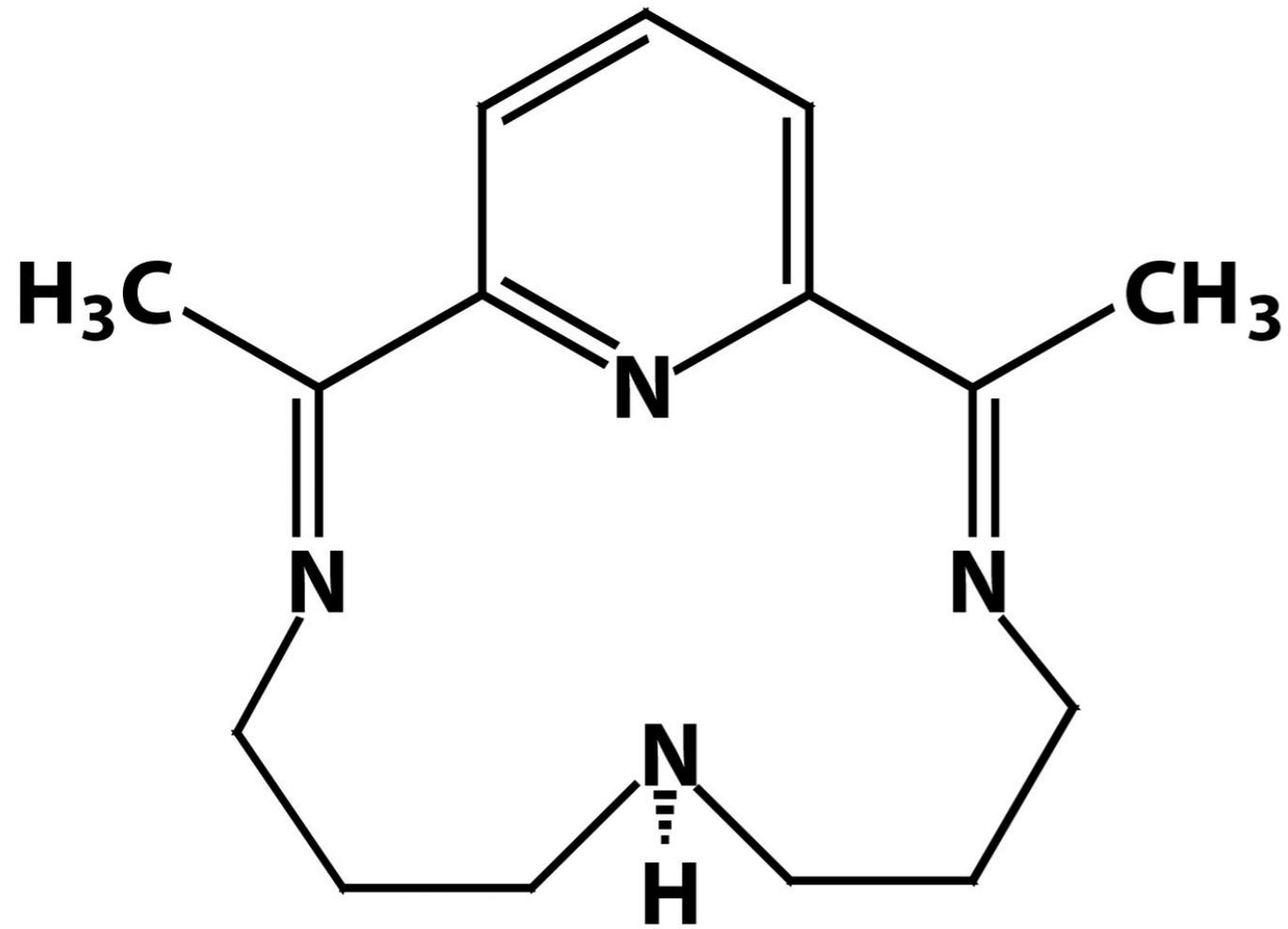


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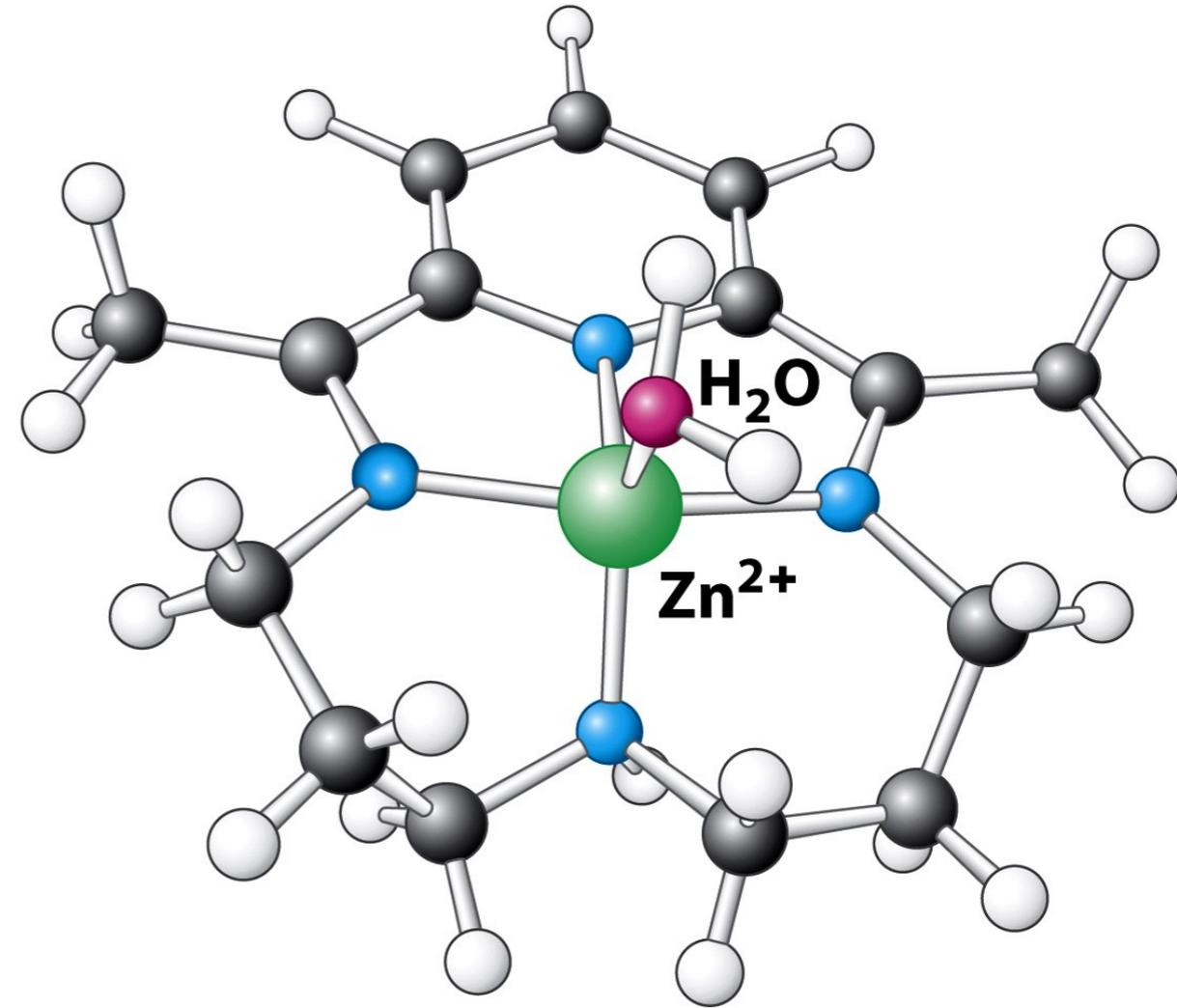


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Enzimas de restrição clivam a ligação fosfodiéster do DNA

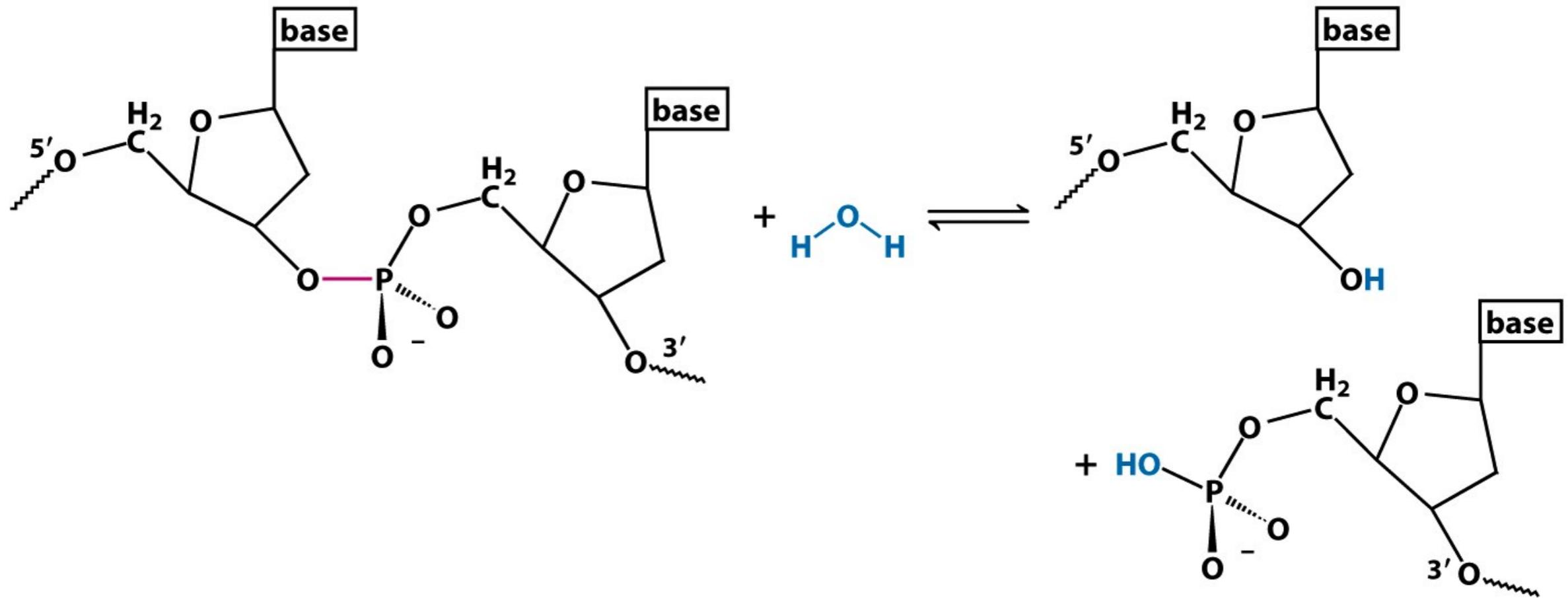
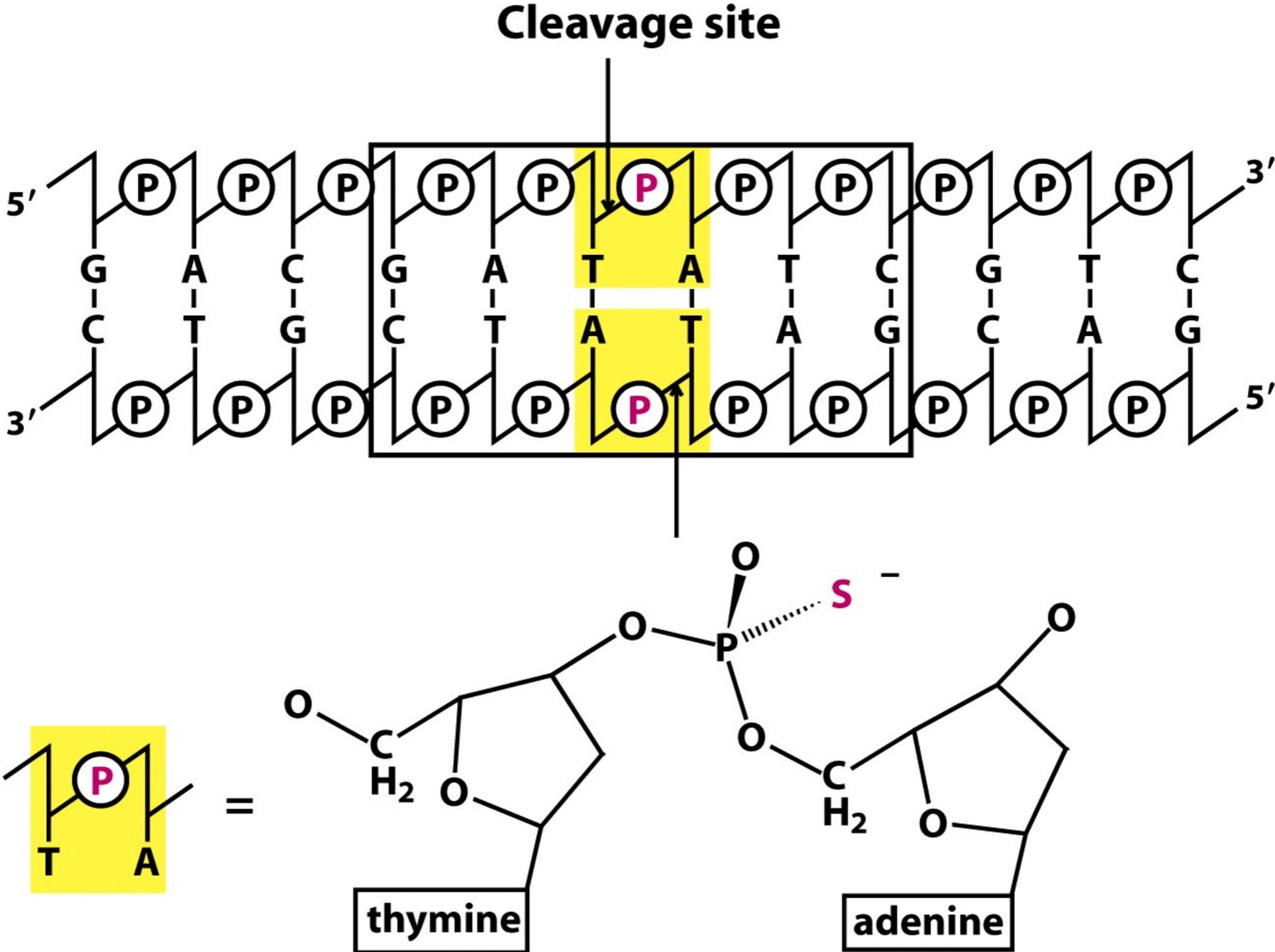


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Além de clivar a ligação fosfodiéster, enzimas de restrição precisam reconhecer o sítio de clivagem especificamente



O ataque nucleofílico é promovido por uma molécula de água, ativada por um íon Mg^{2+}

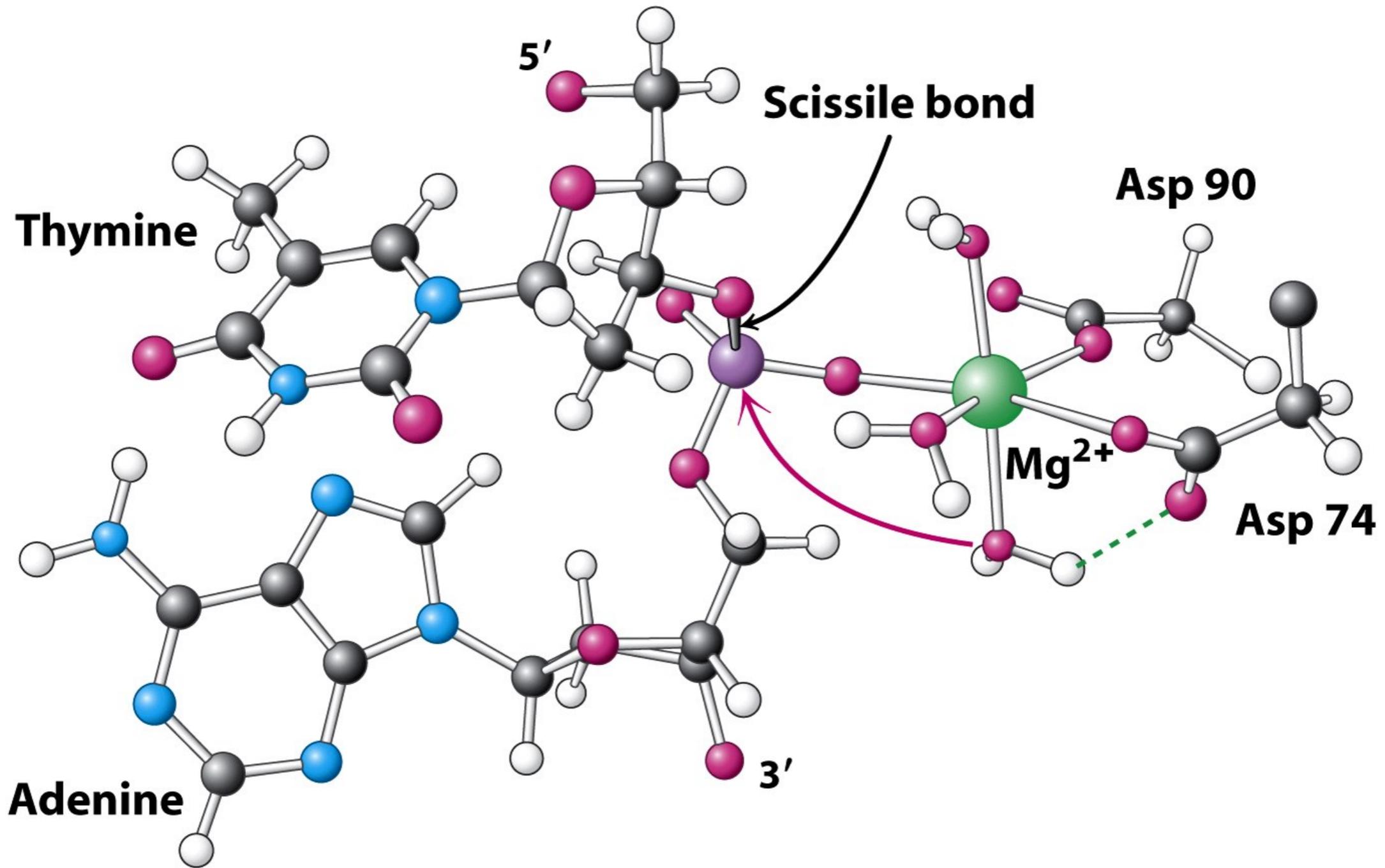


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O sítio de ligação é um palíndromo

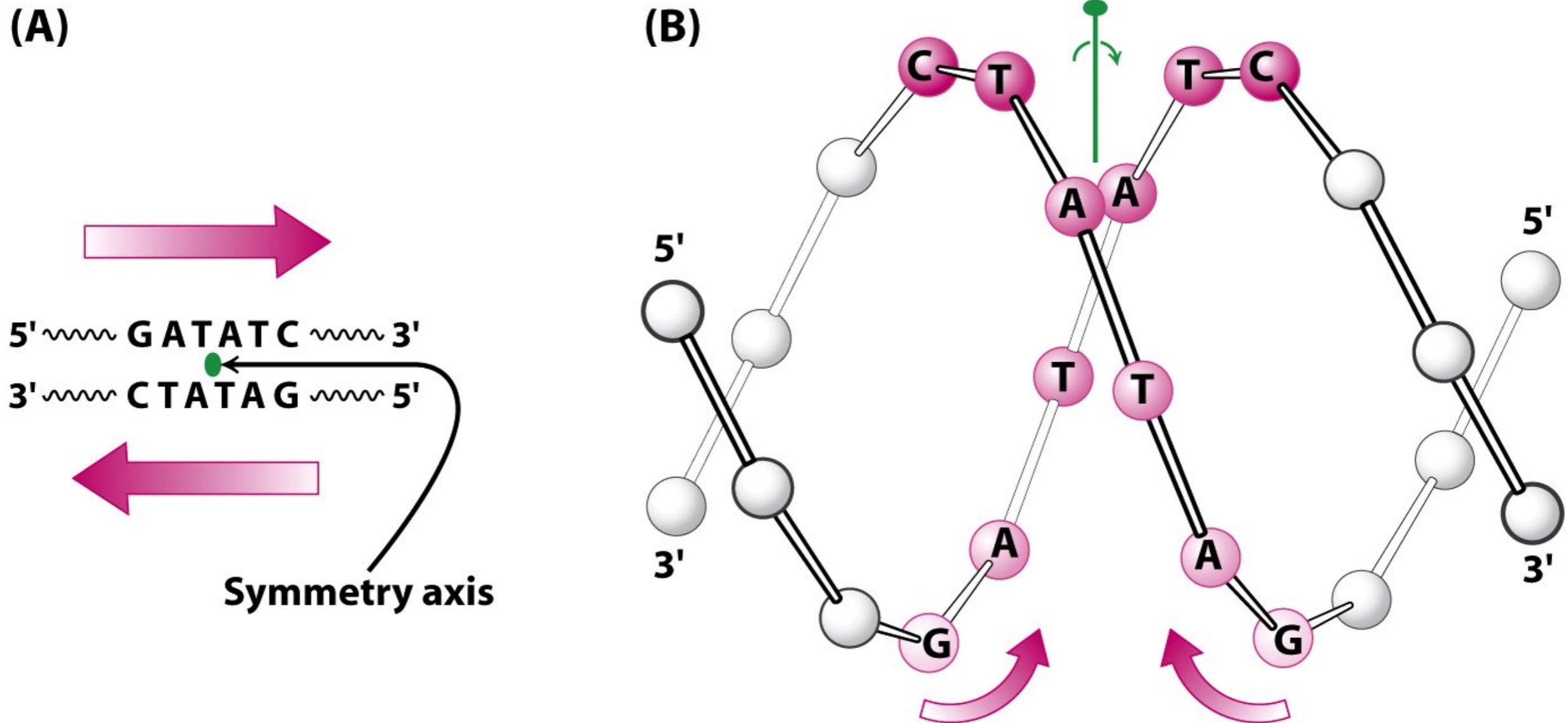
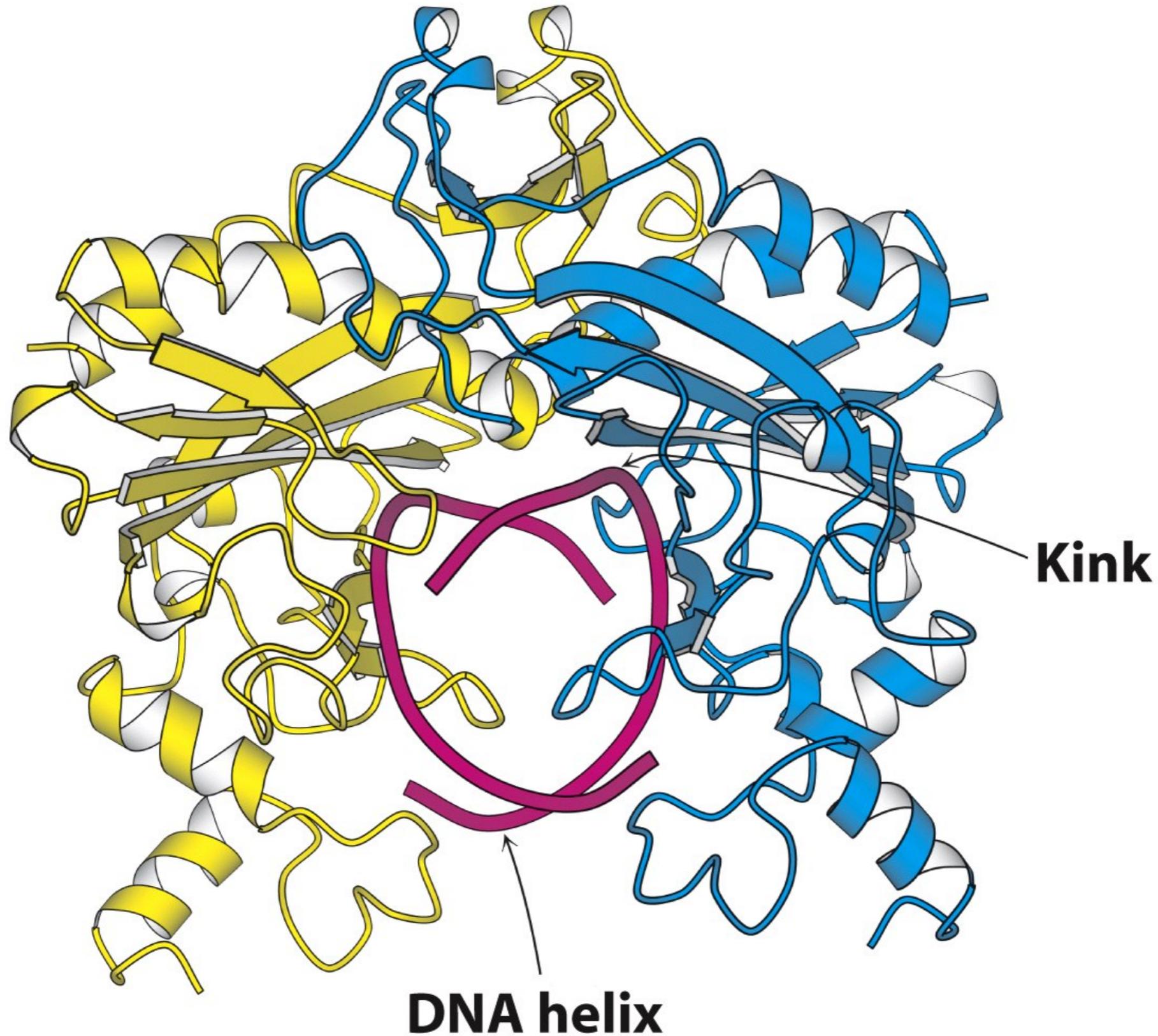


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O sítio de ligação a Mg^{2+} é formado devido à dobra do DNA, que só ocorre com o DNA específico



A EcoRV não é capaz de dobrar a estrutura de um DNA não específico. A energia de ligação ao DNA específico e não específico é a mesma, mas a catálise é diferente

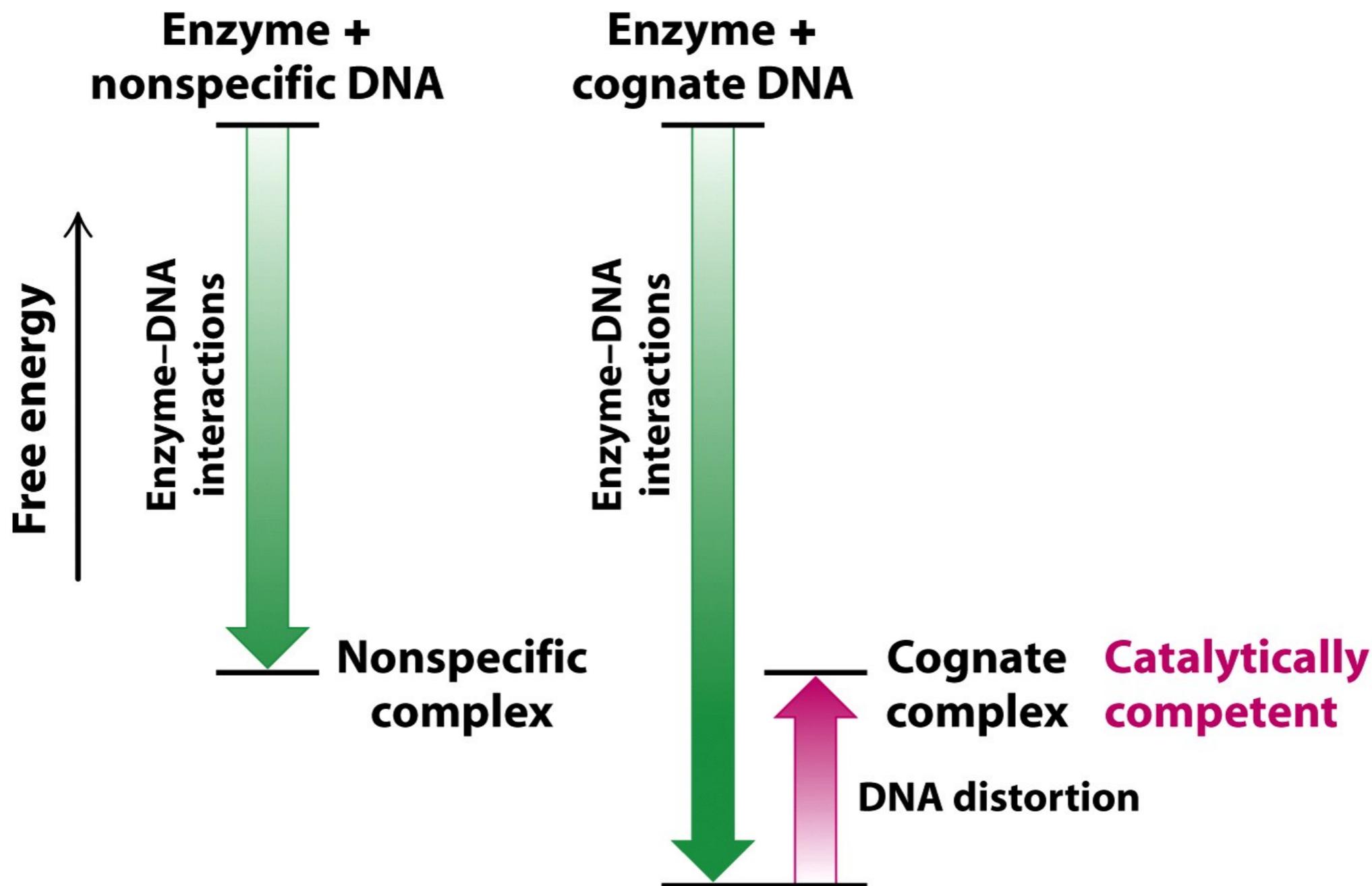


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