

## SECTION OVERVIEW

### 12.3: Kinetics Hint at the Reaction Mechanism

Since the different mechanisms have different rate-limiting steps, there are kinetic consequences for each type of mechanism. We can use kinetic data, therefore, to help distinguish the mechanism of a reaction. However, the information gleaned from rate laws alone can be ambiguous. For example, what does it mean if a reaction depends on the concentration of incoming ligand? How can we distinguish between an associative mechanism ( $A$ ), and an associatively-activated dissociative mechanism ( $D_a$ )?

[12.3.1: Rate Law for Dissociative Mechanisms](#)

[12.3.2: Rate Laws for Interchange Mechanisms](#)

[12.3.3: Rate Law for Associative Mechanisms](#)

[12.3.4: Preassociation Complexes](#)

[12.3.5: Activation Parameters](#)

[12.3.6: Some Reasons for Differing Mechanisms](#)

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