

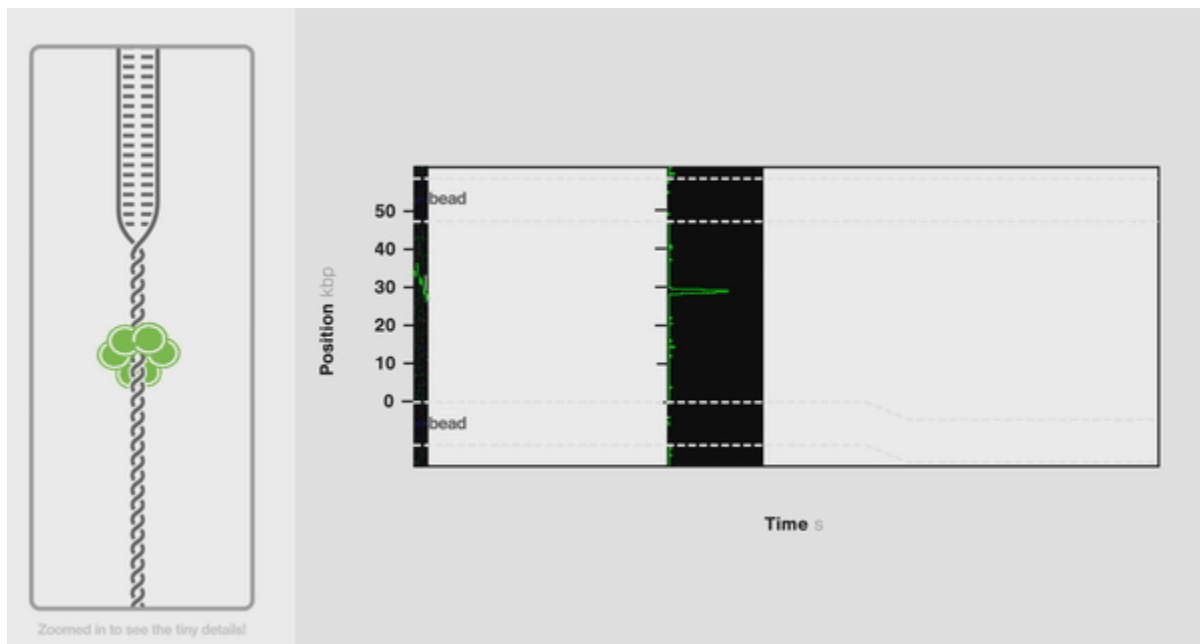
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A Dynamic Single-Molecule Approach to Directly Visualize the Molecular Mechanisms of DNA-Binding Proteins

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Abstract



Studying DNA-binding proteins and validating the molecular mechanism of DNA processes often requires direct functional evidence. Here, we present the C-Trap: a new microscope that allows researchers to directly visualize the dynamics and assembly of the biological complex under different conditions – all at the single-molecule level, providing direct proof of the biological mechanism. We will showcase these functionalities with an example that directly visualizes the dynamical behavior of a helicase, how it activates at the replication fork, and how the replisome is assembled.

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