Cell death signaling at the single molecule level

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Abstract:

Bax and Bak are key regulators of apoptosis and mediate the permeabilization of the outer mitocondrial membrane that leads to cytochrome and Smac release. Although it is widely accepted that Bax and Bak function and molecular mechanism largely overlap, there is limited evidence how Bak works. In previous studies, we have used single molecule microscopy to characterize the oligomerization of Bax in the membrane and its organization at the nanoscale in the mitochondria of apoptotic cells. We now extended these approaches to Bak and identified key structural differences between the two proteins that may have functional implications.



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Single Molecule Science

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