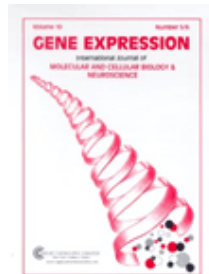


# Hsp27 Inhibits Cytochrome c-Mediated Caspase Activation

## Hsp27 Inhibits Cytochrome c-Mediated Caspase Activation by Sequestering Both Pro-caspase-3 and Cytochrome c

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**Abstract:**

Mitochondrial cytochrome *c* release in response to pro-apoptotic signals leads to the formation of a cytochrome *c*/Apaf-1/procaspase-9 complex (the apoptosome) and resultant activation of caspase-9 and caspase-3. Here we demonstrate that the molecular chaperone, Hsp27, inhibits this cytochrome *c*-mediated activation of caspase-3. Immunodepletion of Hsp27 from cytochrome *c*-activated cytosols resulted in decreased caspase activity. Furthermore, immunoprecipitation of Hsp27 resulted in the coprecipitation of both cytochrome *c* and procaspase-3. In reciprocal experiments, immunoprecipitation of both procaspase-3 and cytochrome *c* resulted in coprecipitation of Hsp27, indicating two independent interactions. These results point to Hsp27 mediating its inhibition of procaspase-3 activation through its ability to sequester both cytochrome *c* and procaspase-3, and thus prevent the correct formation/function of the apoptosome complex.

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