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Blocking Caspase Activation Inhibits Merlin From Inducing Caspase-Dependent Apoptosis

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Poster Presentation P18

**BLOCKING CASPASE ACTIVATION INHIBITS MERLIN FROM INDUCING
CASPASE-DEPENDENT APOPTOSIS**

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The tumor-suppressor protein merlin induces apoptosis by an unknown mechanism. Some evidence suggests the involvement of caspase cascades. Caspase dependent cell death can be initiated by exterior death receptors or be in response to an internal stress, with each pathway initiating independent caspase cascades. To identify the mechanism by which merlin-induced apoptosis is achieved, the activation of multiple caspases was prevented using specific caspase inhibitors. Caspase 3 activity was increased in cells expressing endogenous merlin when compared to merlin-null cells. Adding a caspase 8 or 9 inhibitor greatly reduced caspase 3 activity in cells containing endogenous merlin. After re-expression of merlin in merlin-null cells, the addition of a caspase 3 inhibitor caused an even greater increase in the total percentage of apoptotic cells. Thus, caspase inhibition limits merlin's ability to increase caspase 3 activity but does not affect apoptotic rates.