

RhoB as a Suppressor of Cancer Cell Growth, Cell Transformation, and Metastasis

Researchers at the University of South Florida have developed a novel cancer therapy using the anti-tumor effect of the RhoB protein to induce cancer cell death.

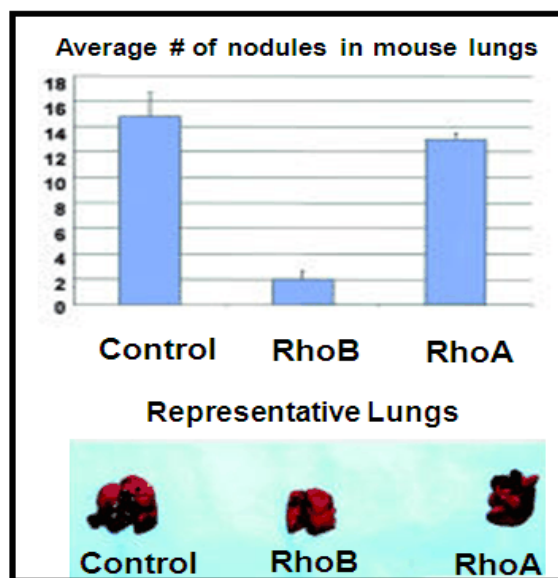
Recent studies have shown that expression of RhoB in human cancer cells leads to inhibition of tumor growth and metastasis as well as induction of cell death. Some studies suggest that the anti-cancer effects of some current chemotherapeutic agents may be due in part to an alteration of RhoB function in the cancer cell.

Our investigators therefore developed a new therapy in which RhoB protein is directly or indirectly administered to cancer cells to inhibit the growth, survival, and metastasis of those cells. This therapy shows great potential as a treatment for a broad spectrum of solid tumors and can also be applied in combination with other anti-cancer agents.

ADVANTAGES:

- RhoB has been shown to inhibit cancer cell proliferation and to induce cancer cell death
- Applicable as therapy for solid tumors
- Can be used in combination with other anti-cancer therapies

Novel cancer treatment targets Ras protein to mediate apoptosis



RhoB, but not RhoA, inhibits cancer cell survival and metastasis. RhoB or RhoA expressing tumor cells were injected into the tail veins of C57/BL6 mice. The metastatic nodules growing in the lungs were counted and photographed at day 21. The numbers of metastatic nodules per mouse lung represent the average \pm standard error from five mice per group.

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