Technology Brief: RhoB Variants for Suppression of Malignancy

Docket Number: 04B102

Summary	• RhoB protein suppresses tumor growth and induces apoptosis. The signaling protein RhoB is reduced in certain tumors; hence restoration of RhoB activity may be an effective therapy. • Certain mutants of RhoB have been identified as maintaining certain tumor-suppressive functions of the wild type protein. • Mutants of RhoB introduced into tumor cells by gene therapy or other means may overcome the reduced activity of the endogenous RhoB and suppress tumor growth.
Features and Benefits	• Tumor types that might benefit from treatment by RhoB variants include lung, brain, pancreatic, prostate, and head and neck. • Mutants of RhoB may retain tumor suppressive activity while being resistant to inactivation by other signaling proteins. • RhoB variants may be combined with other interventions including radiation and chemotherapy. • Delivery of RhoB may be as polypeptides or encoding nucleic acids.
Stage of Development	Proof of concept in human prostate and pancreatic cancer cell lines.
Inventor	Dr. S. M. Sebti
Publications and Patents	Wang, D.A. & Sebti, S.M. (2005) J. Biol. Chem., v. 280, p.19243 – 19249. Patent application pending.

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