Supporting Figure Legends

Fig. S1. Expression of *RKIP* mRNA in different melanoma cells. Total RNA was collected and qPCR was performed as described in Material and Methods.

Fig. S2. Clinical samples from the metastatic melanoma patients were evaluated for the expression of RKIP and MDA-9. Immunohistochemistry staining for the indicated protein was performed as described in Methods and Materials. Representative patients-matched specimens, photographed at lower magnification (4X) in bright field microscope was presented.

Fig. S3. Cells were pre-treated with an ERK inhibitor and plated on fibronectin-coated plates. 6 h after seeding, cell lysates were collected and Western blotting was performed to determine levels of the indicated proteins.

Fig. S4. MDA-9 activates ERK1/2. Serum-starved cells were reseeded on either fibronectin or plastic plates and analyzed by western blot with antibody as indicated.

Fig. S5. Characterization of MDA-9 overexpressed FM-516 clones (FM-516 *mda-9*). (A and B) Stable *mda-9*-overexpressing FM-516 clones (Clones 10 and 14) were analyzed for their basal expression of MDA-9 and RKIP at mRNA (A) and protein (B) levels by real time PCR and Western blotting analysis, respectively. (C) Anchorage-independent growth assay of FM-516 and its *mda-9* overexpressing clones 10 and 14. Assays were done as described in Materials and Methods. Photomicrographs were taken 2 weeks after seeding cells in agar at magnification, 4X. Quantification of results from three independent experiments is represented in the graphs. (D) Matrigel invasion assays of FM-516 and its *mda-9*-overexpressing clones 10 and 14 were performed as described in Materials and Methods. Photomicrographs were taken at 10X magnification and quantification of the results of three independent experiments is provided in the graphs. (E) Constitutive RKIP promoter activity was determined by transfecting RKIP-Luc
construct into FM-516 and its mda-9-overexpressing clones. The data represent mean ± S.D. of three independent experiments.

**Fig. S6.** Effects of RKIP expression on cell growth. (A) Expression efficiency of RKIP in different melanoma cell lines was determined by western blot using HA antibody after transfection of HA tagged RKIP construct. (B) Different melanoma cells were transfected with either vector or RKIP and after 24 hrs, cells were replated on the fibronectin-coated plate. Trypan blue exclusion method was used to count the viable cells at 24 hr and represented as percentage of vector transfected group.

**Fig. S7.** Effect of ectopic expression of RKIP on cytoskeletal organization in melanoma cells. Stably overexpressed mda-9, FM-516 mda-9 Cl.14 and aggressive melanoma C8161.9 was either transfected vector or RKIP and 48 hours after cells were allowed to adhere to a fibronectin-coated surface in the absence of serum. Cells were stained with phalloidin for detection of F-actin filaments.

**Fig. S8.** Effect of RKIP expression on B-RAF mutant cells. (A) Phenotypic alterations in WM278 and SK-Mel-28 cells following ectopic expression of RKIP After 48 hrs post-transfection with the indicated vectors, Matrigel invasion assays were performed as described in Materials and Methods. (B) Cells were transfected with either vector or RKIP and after 48 hrs plated on fibronectin-coated plates. 6 h after seeding, cell lysates were collected and Western blotting was performed to determine levels of the indicated proteins.