

## Supplementary Figure Legends

**Supplemental Figure 1.** A. Identification of TrkB variants by RT-PCR. TrkB variants a through e. TrkB exons are labeled E1 through E24, and introns are indicated by single lines. Forward PCR primer is located at exon 1, which is present in all the variants. The reverse PCR primers are specific for each TrkB variant and located in different exons as indicated. Translated start and termination sites and polyA signals are also indicated. Polymerase chain reaction (PCR) was performed using the following conditions: 30 cycles of 1 minute at 95°C, 1 minute at 55°C, and 3 minutes at 72°C with a final extension at 72°C for 7 minutes, with specific primers corresponding to the open reading frame of specific TrkB isoforms (the upstream primer 5'-ATGTCGTCCTGGATAAGG-3' for all variants and the following specific downstream primers: variants a and c, 5'-GCCTAGA ATGTCCAGGTAG-3'; T1/variant b, 5'-ATACCCATCCAGTGGGATC-3'; and variants d and e, 5'-GGCGGTCTTGGGGGAAC-3'). Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) was amplified with a pair of GAPDH primers (5'-ACGGATTTGGTCGTATTG GG-3' and 5'-TGATTTTGGAGGGATCTCGC-3') used as an internal control. B. Rho GDP dissociation inhibitor 1 (GDI1) short hairpin RNA (shRNA) sequences were shown.

**Supplemental Figure 2.** Promotion of cell growth in Colo357FG cells by ectopic expression of TrkB<sup>T1</sup>. A, Western Blotting shown the expression of TrkB<sup>T1</sup> and TrkB<sup>T1ΔC</sup> in stable clones of Colo357FG. β-actin was used as a loading control. B, Cell-growth analysis for stable clones Colo357FG/Vec, Colo357FG/TrkB<sup>T1ΔC</sup>, and

three Colo357FG/TrkBT1 clones (C1, C4, and C6) in various time points as indicated using an MTT assay.

**Supplemental Figure 3.** TrkBT1 overexpression in pancreatic cancer cell lines and pancreatic tumor and liver metastatic specimens and in induction of RhoA activation by Western blot analysis. *A*, determining TrkBT1 expression from Colo357FG/TrkBT1 cell-derived pancreatic tumor and Colo357FG/TrkBT1-induced liver metastatic lesions. *B*, Determination of RhoA activation in cell extracts isolated from MiaPaCa, BxPc-3, Capan-2, and Hs766t cells using GST-Rhotekin-RBD protein beads. Immunoblot was performed to determine the expression levels of GTP-bound RhoA (*Top*), TrkBT1, RhoA and  $\beta$ -actin in these cells.

**Supplemental Table 1.** Expression of TrkB variants in pancreatic cancer cell lines and specimens.

**Supplemental Table 2.** TrkBT1 overexpression- and RhoGDI1-knockdown-induced liver metastasis in pancreatic cancer cells using an orthotopic nude mouse model.