Supplemental Materials and Methods:

Cell migration and invasion assays

The cells were transfected with either antogomiR-301 or NC (40nM), then plated on either control inserts (PET membrane) or trans-well chambers with Matrigel. Medium containing 15% fetal bovine serum in the lower chamber served as the chemo-attractant. The invasive cells attached to the lower surface of the membrane insert were fixed and stained, then counted under a microscope. The percentage invasion was calculated based on the number of cells which have invaded through the Matrigel insert, divided by the number of cells which have migrated through the control insert.