Disrupting LIN28 in atypical teratoid rhabdoid tumors reveals the importance of the mitogen activated protein kinase pathway as a therapeutic target

Supplementary Material

Supplemental Figure 1A: LIN28A is expressed in a subset of medulloblastoma, as detected by immunohistochemistry. Normal brain is largely negative for LIN28A expression (left). In contrast, 24 percent of medulloblastoma (15/63 samples) showed increased expression of LIN28A (right). Magnification 400X.

Supplemental Figure 1B: LIN28B is expressed in 16/31 (52%) of medulloblastoma samples, compared to developing cerebellum (positive is considered 5-fold increased expression compared to control normal cerebellum 5 year old sample (far left)).
Supplemental Figure 2: Knockdown of LIN28A leads to increased apoptosis (sub G1 fraction) as measured by cell cycle assay using a Guava flow cytometer after propidium iodide staining.

Supplemental Figure 3: Lentiviral shRNA suppression of LIN28A leads to a 50% reduction p42 phospho-ERK expression (lower band in p-ERK blot) in the CHLA-06 AT/RT cell line. Quantification was performed using ImageJ densitometry and normalized to total ERK expression. SCR= scramble control shRNA
Supplemental Figure 4: Selumetinib treatment leads to decreased growth in the BT 12 AT/RT cell line as measured by MTS assay. Asterisk indicates $p<0.0005$ 10 uM vs DMSO. 100 nM and 1 uM concentrations are not significantly different ($p=0.16$) at day 7.
Supplemental Figure 5: Selumetinib treatment leads to decreased S-phase entry and increased apoptosis as measured by cell cycle assay using a Guava flow cytometer after propidium iodide staining.