

**S2 Table. Examples of genes that belong to KEGG pathways in S3 Fig.**

KEGG pathway	Category	Genes	P-value
Regulation of actin cytoskeleton	Up-regulated KEGG pathways in CCNY-WT	<b><u>Arpc1b</u></b> , Pfn3, Fgf23, <b><u>Pik3r5</u></b> , <b><u>Wasl</u></b> , Ins2, Fgf1, F2r	0.0934
	Down-regulated KEGG pathways in CCNY-shRNA	Egfr, <b><u>Chrm5</u></b> , Fgfr3, <b><u>Chrm4</u></b> , <b><u>Gsn</u></b> , <b><u>Itgb8</u></b> , Fgf16, <b><u>Itgb5</u></b> , <b><u>Mylpf</u></b> , Fgf22, Pdgfc, <b><u>Vav2</u></b> , <b><u>Iqub</u></b>	0.0515
Chemokine signaling pathway	Up-regulated KEGG pathways in CCNY-WT	Ccl1, <b><u>Cxcl1</u></b> , <b><u>Ccl2</u></b> , <b><u>Pik3r5</u></b> , <b><u>Wasl</u></b> , <b><u>Ccl7</u></b> , Cxcl10	0.0982
	Down-regulated KEGG pathways in CCNY-shRNA	<b><u>Ccl2</u></b> , Prex1, Ccr10, Rasgrp2, <b><u>Vav2</u></b> , Stat1, Cxcl12, Prkx, <b><u>Ccl7</u></b> , <b><u>Iqub</u></b> , Shc4	0.0651
Cytokine-cytokine receptor interaction	Down-regulated KEGG pathways in CCNY-shRNA	Il4, Egfr, <b><u>Flt1</u></b> , <b><u>Ccl2</u></b> , <b><u>Met</u></b> , Hgf, Cxcl12, Lif, Acvr2a, Ccr10, Eda, Ltb, Ifngr2, Ifngr1, Bmpr1a	0.0068
Focal adhesion	Down-regulated KEGG pathways in CCNY-shRNA	Prkca, Egfr, <b><u>Flt1</u></b> , <b><u>Met</u></b> , <b><u>Itgb5</u></b> , <b><u>Mylpf</u></b> , Hgf, <b><u>Vav2</u></b> , <b><u>Itgb8</u></b> , <b><u>Reln</u></b> , Pdgfc, Col11a2, Col11a1, Shc4	0.0150
ECM-receptor interaction	Down-regulated KEGG pathways in CCNY-shRNA	Cd44, <b><u>Itgb8</u></b> , <b><u>Itgb5</u></b> , <b><u>Reln</u></b> , Col11a2, <b><u>Sdc4</u></b> , Col11a1, Sv2c	0.0196

\*Note that qRT-PCR validated genes are bold underlined.