

Supplementary Table 6. Differential and statistically significant biological themes

(clusters C6 – C11).

Cluster	Transcript #	Expression Pattern	Biological Theme	Example Genes
C6	350	Down in all, variable in class 1 NFSCs and some neurofibromas	Cell surface receptor linked signal transduction, Cytoskeleton organization and biogenesis, Glycoprotein metabolism, Nervous system development	ADAM23, CNP, DNAH9, EDG3, GAP43, GDF8, GFRA1, GFRA2, GFRA3, GIT1, GNG2, GPR126, IFNAR2, ITGA6, ITGB8, KLK6, L1CAM, LEF1, MBP, MERTK, METRN, NCK2, NGFR, NPY5R, NRCAM, NTRK3, PAX3, RHOJ, SEMA3B, SEMA6A
C7	443	Down in all except class 1 NFSCs, variable in class 2NFSCs and some neurofibromas	Sphingolipid metabolism, Neurogenesis	BRSK1, FEZ1, FEZ2, LARGE, NRP2, NTNG1, PHCA, SERINC1, ST8SIA5, UGT8
C8	355	Down in most MPNST cell lines, variable in MPNSTs and class 2 NFSCs	Cell adhesion, Nervous system development	ARHGAP5, AZGP1, CDH19, COL14A1, EDNRB, EFS, FEZ1, GAS7, GPM6B, HDAC4, HNT, HSPG2, ITGB1BP1, ITGB7, KLK8, MAL, MPZ, NLGN4X, PCDH20, PMP2, PMP22, PPFIBP1, PTPRZ1, S100B, SORBS1, SOX8, TLN2
C9	260	Up in MPNST cell lines and MPNST	Chromosome organization and biogenesis, Extracellular matrix organization and biogenesis, Morphogenesis, Nervous system development	CDC42EP4, COL4A6, DMRT1, DNER, EPHB2, EPHB4, EYA4, F2R, FOXE1, FOXG1B, FZD2, H2AFY2, HIST1H2BD, HMGA2, HMGB2, HOXC13, MDK, PAX6, SEMA3A, SOX11, ZIC1, ZIC2
C10	128	Up in all, variable in class 1 NFSCs	Cell adhesion, Intracellular signaling cascade, JAK-STAT signaling pathway, Skeletal development	ARHGAP6, ARHGDIB, CASP1, CD36, DAPK1, DCAMKL1, EGFR, ETS2, FGFR1, HMCN1, LEPR, MAP3K5, NOG, SHOX2, SOCS3, SPRY1, SPRY4, STAT5B
C11	172	Up class 2 NFSCs, MPNST cell lines and MPNSTs, variable in class 1 NFSCs and neurofibromas	Cell adhesion, Morphogenesis, Skeletal development, Wnt receptor signaling pathway	AMIGO2, CDH11, CDH13, COL6A1, COL6A2, COL6A3, DACT1, EN1, FBN2, FZD7, IGFBP3, ITGB5, LPXN, PAPSS2, PCDH18, PITX2, ROBO1, SOX9, TBX3, THY1, TLE4, TPBG, TWIST1, TWIST2, WNT5A, WNT5B