

Supplemental_Table_S5: Pathways associated with 5-hmC changes and associated gene expression changes in pancreatic cancer

No.	Canonical Pathways	-log (p-value)	Molecules
1	STAT3 Pathway	3.70	BMPR2, KRAS, TGFBR2, NRAS, CDKN1A, CDC25A, MAPK1, PTPN6, NTRK2, FGFR4, FGFR1
2	IL-15 Signaling	3.44	KRAS, NRAS, SYK, TNF, STAT5A, LCK, IL4, MAPK1, PIK3C2B, IL15RA
3	NF-kB Signaling	3.17	SIGIRR, KRAS, PIK3C2B, FADD, FGFR1, BMPR2, NRAS, TGFBR2, IL1RN, BCL10, TNF, LCK, CREBBP, NTRK2, FGFR4, ZAP70, TRAF6
4	Antiproliferative Role of Somatostatin Receptor 2	3.11	KRAS, NRAS, GNG3, GNG10, CDKN1A, MAPK1, PIK3C2B, PTPN6, GUCY2C
5	Human Embryonic Stem Cell Pluripotency	2.96	SMAD6, PIK3C2B, FGF2, FGFR1, WNT2B, WNT11, BMPR2, TGFBR2, NTRK2, TCF7L2, FGFR4, BDNF, SOX2, FOXO1
6	CDK5 Signaling	2.61	MAPK15, KRAS, NRAS, PPP1R14A, ADCY6, MAPK1, NTRK2, PPP1R14D, PPP1R1B, BDNF, CABLES1
7	TGF- β Signaling	2.50	BMPR2, KRAS, TGFBR2, NRAS, MAP4K1, MAPK1, SMAD6, CREBBP, TRAF6, SMAD9
8	Role of JAK1 and JAK3 in Cytokine Signaling	2.49	KRAS, NRAS, SYK, STAT5A, IL4, MAPK1, PIK3C2B, IL15RA, TRPV6, NCOR2, KLK6, CDKN1A, IGFBP5, HR, FOXO1, KLF4
9	VDR/RXR Activation	2.35	, TRPV5
10	Thyroid Cancer Signaling	2.30	KRAS, NRAS, MAPK1, NTRK2, TCF7L2, BDNF
11	Natural Killer Cell Signaling	2.28	KRAS, NRAS, SYK, LCK, MAPK1, PIK3C2B, PTPN6, KLRC4, KLRK1/KLRK1, NCK1, ZAP70, VAV3
12	Ephrin Receptor Signaling	2.27	KRAS, EPHB6, EPHB3, VEGFA, GNG10, NGEF, EPHA4, NRAS, GNG3, NCK2, SORBS1, MAPK1, CREBBP, PTPN13, NCK1
13	Mouse Embryonic Stem Cell Pluripotency	2.26	BMPR2, KRAS, NRAS, MAPK1, PIK3C2B, CREBBP, TCF7L2, DVL2, SOX2, SMAD9
14	Glucocorticoid Receptor Signaling	2.25	NCOR2, KRAS, IL4, PIK3C2B, PRKAB1, VIPR1, NR3C2, NFATC1, FKBP4, NRAS, TGFBR2, IL1RN, PBX1, TNF, STAT5A, CDKN1A, MAPK1, CREBBP, POLR2J2/POLR2J3, TRAF6
15	IL-2 Signaling	2.22	KRAS, NRAS, SYK, STAT5A, LCK, MAPK1, PIK3C2B
16	Adipogenesis pathway	2.21	AGPAT2, BMPR2, TNF, NR1D2, RBP1, KMT2B, FGF2, SIRT2, FGFR4, FOXO1, SMAD9, FGFR1
17	Protein Kinase A Signaling	2.20	DUSP8, PPP1R14A, ADCY6, PTPRB, PDE3B, GNG10, PLCE1, PDE4C, GNG3, CREBBP, PTPN6, PPP1R14D, TCF7L2, PTPN13, PPP1R1B, ANAPC13, EYA1, TIMM50, CDC25A, TH, NFATC1, DUSP22, TGFBR2, MYLPP, MAPK1, PDE9A
18	T Cell Receptor Signaling	2.19	KRAS, NRAS, BCL10, LCK, CSK, MAPK1, PIK3C2B, NFATC1, ZAP70, VAV3
19	Renal Cell Carcinoma Signaling	2.12	KRAS, VHL, NRAS, VEGFA, EGLN3, MAPK1, PIK3C2B, CREBBP
20	Phospholipase C Signaling	2.10	KRAS, PPP1R14A, PLA2G10, ADCY6, PLD3, GNG10, PLCE1, NFATC1, NRAS, SYK, GNG3, MYLPP, ARHGEF1, LCK, MAPK1, CREBBP, RHO, ZAP70