

Supplementary Materials: Contingencies of UTX/KDM6A action in urothelial carcinoma

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Table S1. GO-pathways commonly regulated in RT112 and VM-CUB-1 by UTX-TagGFP2.

Upregulated GO-Pathways	Downregulated GO-Pathways
GO_MRNA_METABOLIC_PROCESS	GO_SECRETORY_VESICLE
GO_RIBONUCLEOPROTEIN_COMPLEX_BIOGENESIS	GO_EXTRACELLULAR_SPACE
GO_NCRNA_METABOLIC_PROCESS	GO_REGULATION_OF_RESPONSE_TO_EXTERNAL_STIMULUS
GO_RIBONUCLEOPROTEIN_COMPLEX	GO_REGULATION_OF_ANATOMICAL_STRUCTURE_MORPHOGENESIS
GO_ATPASE_ACTIVITY	GO_EXTRACELLULAR_STRUCTURE_ORGANIZATION
GO_POLY_A_RNA_BINDING	GO_POSITIVE_REGULATION_OF_CELL_PROLIFERATION
GO_RNA_BINDING	GO_RESPONSE_TO_OXYGEN_CONTAINING_COMPOUND
GO_NUCLEOPLASM_PART	GO_CATION_TRANSMEMBRANE_TRANSPORTER_ACTIVITY
GO_POSTTRANSCRIPTIONAL_REGULATION_OF_GENE_EXPRESSION	GO_POSITIVE_REGULATION_OF_CELL_COMMUNICATION
GO_RNA_SPLICING	GO_PROTEINACEOUS_EXTRACELLULAR_MATRIX
GO_RNA_SPLICING_VIA_TRANSESTERIFICATION_REACTIONS	GO_POSITIVE_REGULATION_OF_RESPONSE_TO_STIMULUS
GO_NUCLEOLUS	GO_INTRINSIC_COMPONENT_OF_PLASMA_MEMBRANE
GO_NCRNA_PROCESSING	GO_REGULATION_OF_ION_TRANSPORT
GO_CHROMOSOME_ORGANIZATION	GO_BIOLOGICAL_ADHESION
GO_MRNA_PROCESSING	GO_RESPONSE_TO_CYTOKINE
GO_RNA_PROCESSING	GO_POSITIVE_REGULATION_OF_INTRACELLULAR_SIGNAL_TRANSDUCTION
GO_CHROMOSOME	GO_ENDOPLASMIC_RETICULUM
GO_DNA_METABOLIC_PROCESS	

Table S2. Antibodies for western blot analysis.

Antibody	Supplier	ID	Dilution
UTX	Cell Signaling Technology	#33510	1:500
RBBP5	Cell Signaling Technology	#13171	1:1.000
WDR5	Cell Signaling Technology	#13105	1:1.000
EZH2	Cell Signaling Technology	#3147	1:1.000
TubA	Abcam	ab4074	1:50.000
GFP	Cell Signaling Technology	#2955	1:1.000
H3	Cell Signaling Technology	#4499	1:1.000
H4	Active Motif	#61199	1:1.000
H3K27me2/3	Active Motif	#39535	1:1.000
H3K27ac	Active Motif	#39133	1:1.000
H4K4me3	Active Motif	#39915	1:1.000
Lamin A/C	Cell Signaling Technology	#2032	1:1.000

HER2	Cell Signaling Technology	#2165	1:1,000
Rabbit Anti-Mouse Immunoglobulins/HRP	Dako	P0260	1:2000
Goat Anti-Rabbit Immunoglobulins/HRP	Dako	P0448	1:2000

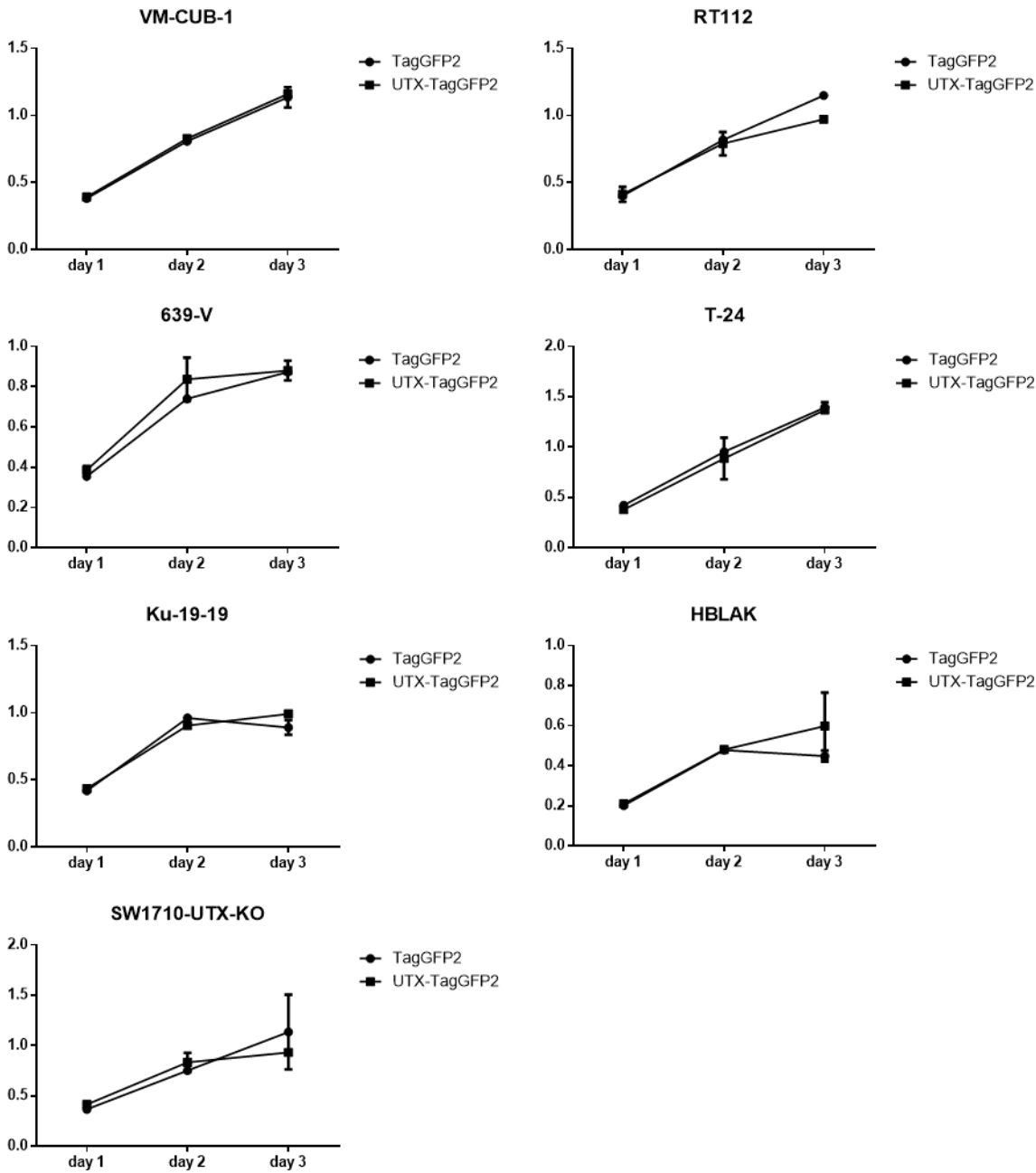


Figure S1. Urothelial cancer cells transduced with UTX-TagGFP2 show no significant changes in cellular vitality measured by MTT assay over a period of three days.

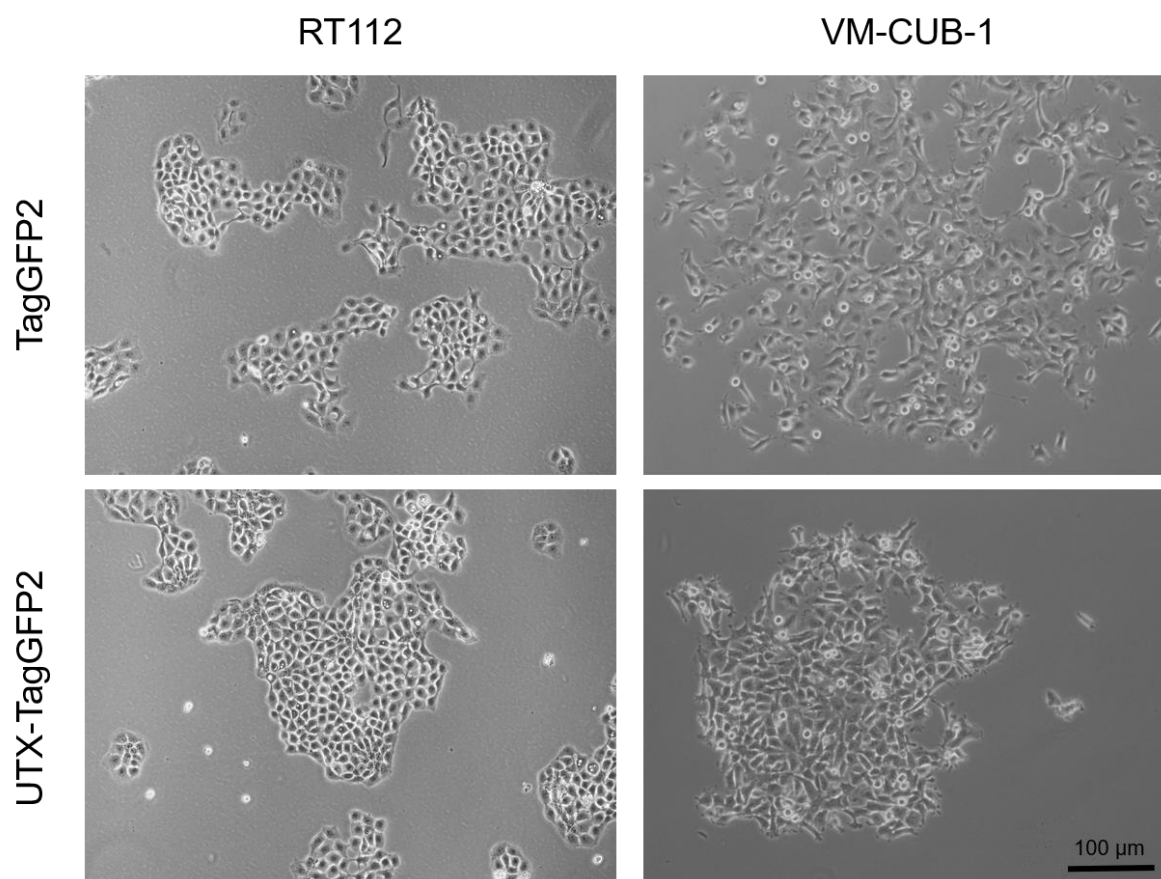


Figure S2. Morphology of urothelial cancer cell lines transduced with UTX-TagGFP2. Note the more compact growth pattern of colonies especially in VM-CUB-1 cells. .

Table S3. Primers used for quantification of selected genes by Real-Time-PCR.

Gene	Fw (5'→3'):	Rev (5'→3'):	Annealing Temperature
KDM6A	GGCGATAAAGTTGGTGTGCT	GAACAGCCTTGCCCAGTAG	55 °C
KDM6B	GACCCCGACTTGTTC AAGA	CCCTGGTAAGCGATTTTCT	55 °C
CDKN1A	GGAAGACCATGTGGACCTGT	GGCGTTTGGAGTGGTAGAAA	55 °C
DNMT1	GGCTATCAGTGCACCTTCG	GGAGCAAACACGTGCAGTG	55 °C
TBP	ACAACAGCCTGCCACCTTA	GAATAGGCTGTGGGGTCAGT	55 °C
KMT2C	TTACACACAGTGC GCTCCTT	AGGGTCTGCACATGCTACAA	55 °C
KMT2D	CGCAGTGCTCTCAGTGCTAT	AGTCATCACAGAGCAGCAGG	55 °C

Table S4. Used siRNAs for specific gene expression knockdown.

siRNA	Supplier	ID	Used concentration
KMT2C	Dharmacon	L-007039-00-0005	8 nM (or 4 nM in double transfection)
KMT2D	Dharmacon	L-004828-00-0005	8 nM (or 4 nM for double transfection)
control	Dharmacon	D-001810-01-05	8 nM