

Supplemental Table 1: Antibody Suppliers and Catalog Numbers

Target Protein	Antibody	
	Catalog #	Supplier
Immunoblot		
Actin	sc-1616	Santa Cruz Biotechnology
MERTK	ab52968	Abcam
phospho-MERTK (Tyr749/Tyr753/Tyr754)	N/A	Phosphosolutions
STAT6	9362	Cell Signaling
phospho-STAT6 (Tyr641)	9364	Cell Signaling
AKT	9272	Cell Signaling
phospho-AKT (Ser473)	9271	Cell Signaling
p44/42-MAPK	9102	Cell Signaling
phospho-p44/42-MAPK (Thr202/Tyr204)	9106	Cell Signaling
Flow Cytometry		
human CD45+	347464	BD Fisher
Sca-1 (Ly-6A/E)-FITC	11-5981-82	eBioscience
CD127-PerCP-Cy5.5	45-1271-80	eBioscience
CD34-eFluor660	50-0341-80	eBioscience
CD16/32	12-0161-81	eBioscience
c-kit-PE-Cy7	105814	Biolegend
Fli2/Fli3-PE	553842	BD Biosciences
Lineage antibody cocktail-V450	51-9006957	BD Biosciences

Supplemental Table 2: Cell Cycle Profiles in Acute Leukemia Cell Lines Treated with UNC2025. Mean values, standard errors, and p values compared to vehicle treatment from 3 independent experiments are shown. (NS=Not Significant, *p<0.05, **p<0.01, ***p<0.001, ****p<0.0001)

Cell Line & Treatment Time	UNC2025	G0/G1 Phase		S Phase		G2/M Phase		Polyploid	
		% Cycling Cells	p value	% Cycling Cells	p value	% Cycling Cells	p value	% Cycling Cells	p value
697 x6 hrs	0 nM	52.2 +/- 2.11	---	30.1 +/- 2.28	---	17.7 +/- 2.09	---	---	
	50 nM	46.3 +/- 2.27	NS	36.5 +/- 5.00	NS	17.9 +/- 4.14	NS		
	100 nM	44.8 +/- 2.74	NS	36.2 +/- 3.06	NS	19.0 +/- 2.65	NS		
	200 nM	34.2 +/- 2.37	*	36.8 +/- 1.87	NS	29.0 +/- 4.09	NS		
	300 nM	33.8 +/- 2.54	**	36.8 +/- 2.73	NS	29.4 +/- 4.48	NS		
697 x24 hrs	0 nM	39.6 +/- 2.02	---	45.0 +/- 2.95	---	15.4 +/- 1.31	---	---	
	50 nM	42.1 +/- 1.65	NS	42.5 +/- 2.01	NS	15.4 +/- .8	NS		
	100 nM	49.2 +/- 2.04	NS	37.8 +/- 1.06	NS	13.1 +/- 1.55	NS		
	200 nM	20.5 +/- 11.06	*	17.9 +/- 1.27	****	61.7 +/- 10.49	****		
	300 nM	8.2 +/- 0.66	***	18.7 +/- 1.32	****	73.1 +/- 1.01	****		
697 x48 hrs	0 nM	43.0 +/- 2.17	---	39.7 +/- 1.05	---	17.2 +/- 1.02	---	---	
	50 nM	43.8 +/- 1.76	NS	39.9 +/- 1.16	NS	16.3 +/- 1.35	NS		
	100 nM	45.0 +/- 1.73	NS	37.9 +/- 1.33	NS	17.1 +/- 0.91	NS		
	200 nM	28.7 +/- 8.78	NS	10.0 +/- 2.53	****	61.3 +/- 9.78	***		
	300 nM	16.3 +/- 6.20	*	18.3 +/- 4.07	***	65.4 +/- 5.69	***		
REH x6 hrs	0 nM	47.9 +/- 1.28	---	37.6 +/- 2.36	---	14.6 +/- 1.72	---	---	
	50 nM	46.1 +/- 1.60	NS	39.3 +/- 2.47	NS	14.6 +/- 2.04	NS		
	100 nM	46.7 +/- 1.15	NS	36.5 +/- 2.34	NS	16.8 +/- 2.44	NS		
	200 nM	32.2 +/- 2.19	***	39.5 +/- 1.21	NS	28.3 +/- 3.42	*		
	300 nM	27.9 +/- 1.28	****	41.8 +/- 0.93	NS	30.4 +/- 2.19	**		
REH x24 hrs	0 nM	46.9 +/- 2.31	---	37.8 +/- 3.12	---	15.3 +/- 0.78	---	---	
	50 nM	47.8 +/- 2.05	NS	37.6 +/- 2.87	NS	14.6 +/- 0.75	NS		
	100 nM	48.9 +/- 2.14	NS	37.1 +/- 3.16	NS	14.0 +/- 0.94	NS		
	200 nM	26.5 +/- 5.43	**	20.7 +/- 3.32	**	52.8 +/- 8.30	****		
	300 nM	5.0 +/- 0.70	****	10.2 +/- 2.18	****	84.8 +/- 2.54	****		
REH x48 hrs	0 nM	48.5 +/- 0.38	---	37.0 +/- 0.64	---	14.5 +/- 0.15	---	---	
	50 nM	48.9 +/- 0.62	NS	36.1 +/- 0.46	NS	15.0 +/- 0.22	NS		
	100 nM	50.3 +/- 0.61	NS	35.0 +/- 1.06	NS	14.7 +/- 1.07	NS		
	200 nM	34.4 +/- 6.58	*	14.9 +/- 4.24	****	50.7 +/- 9.92	***		
	300 nM	3.7 +/- 0.26	****	2.4 +/- 0.37	****	93.9 +/- 1.79	****		
Jurkat x6 hrs	0 nM	48.8 +/- 1.68	---	30.8 +/- 4.89	---	20.3 +/- 3.24	N/A	0.1 +/- 0.03	---
	50 nM	47.6 +/- 1.47	NS	30.5 +/- 4.73	NS	21.7 +/- 3.40	NS	0.1 +/- 0.03	NS
	100 nM	43.1 +/- 2.93	NS	33.3 +/- 3.30	NS	23.5 +/- 2.82	NS	0.1 +/- 0.02	NS
	200 nM	28.8 +/- 0.44	****	31.3 +/- 4.69	NS	39.8 +/- 5.23	*	0.1 +/- 0.03	NS
	300 nM	25.4 +/- 1.23	****	32.1 +/- 4.17	NS	42.5 +/- 5.42	*	0.1 +/- 0.03	NS
Jurkat x24 hrs	0 nM	50.1 +/- 1.63	---	29.9 +/- 1.59	---	19.9 +/- 2.30	N/A	0.2 +/- 0.04	---
	50 nM	49.2 +/- 1.57	NS	29.8 +/- 1.55	NS	20.6 +/- 2.43	NS	0.3 +/- 0.05	NS
	100 nM	48.0 +/- 1.77	NS	28.7 +/- 1.29	NS	22.3 +/- 2.22	NS	0.9 +/- 0.15	NS
	200 nM	28.3 +/- 8.22	***	12.8 +/- 2.81	****	38.7 +/- 2.68	**	20.2 +/- 4.30	***
	300 nM	4.2 +/- 1.15	****	4.2 +/- 0.27	****	55.0 +/- 3.71	****	36.5 +/- 4.10	****
Jurkat x48 hrs	0 nM	53.1 +/- 0.05	---	32.5 +/- 2.24	---	14.0 +/- 1.26	N/A	0.3 +/- 0.06	---
	50 nM	55.2 +/- 0.86	NS	30.9 +/- 1.83	NS	13.6 +/- 1.48	NS	0.3 +/- 0.05	NS
	100 nM	53.1 +/- 1.12	NS	31.7 +/- 2.27	NS	14.3 +/- 1.84	NS	0.9 +/- 0.11	NS
	200 nM	28.8 +/- 7.96	**	18.3 +/- 2.86	**	32.0 +/- 3.28	NS	20.9 +/- 6.48	NS
	300 nM	8.0 +/- 3.79	****	11.3 +/- 0.81	***	30.2 +/- 10.43	NS	50.5 +/- 15.12	**
Kasumi-1 x6 hrs	0 nM	63.3 +/- 0.61	---	23.9 +/- 1.20	---	12.8 +/- 0.65	---	---	
	50 nM	66.1 +/- 0.30	NS	21.1 +/- 0.35	NS	12.8 +/- 0.61	NS		
	100 nM	66.1 +/- 0.96	NS	20.7 +/- 0.88	NS	13.2 +/- 0.43	NS		
	200 nM	61.4 +/- 1.10	NS	22.2 +/- 1.68	NS	16.3 +/- 0.74	**		
	300 nM	60.1 +/- 1.68	NS	23.3 +/- 1.57	NS	16.7 +/- 0.38	**		
Kasumi-1 x24 hrs	0 nM	64.0 +/- 2.86	---	24.2 +/- 1.97	---	11.9 +/- 0.62	---	---	
	50 nM	67.0 +/- 0.87	NS	22.7 +/- 0.93	NS	10.3 +/- 0.52	NS		
	100 nM	71.8 +/- 0.31	NS	18.4 +/- 0.38	*	9.8 +/- 0.41	NS		
	200 nM	61.2 +/- 3.30	NS	20.5 +/- 0.93	NS	18.3 +/- 1.38	***		
	300 nM	60.8 +/- 2.93	NS	18.7 +/- 1.18	*	20.6 +/- 0.72	****		
Kasumi-1 x48 hrs	0 nM	67.5 +/- 0.94	---	20.5 +/- 1.37	---	12.1 +/- 0.56	---	---	
	50 nM	69.0 +/- 0.46	NS	19.3 +/- 0.87	NS	11.8 +/- 0.56	NS		
	100 nM	71.8 +/- 0.82	NS	17.5 +/- 0.83	NS	10.6 +/- 0.63	NS		
	200 nM	63.7 +/- 3.33	NS	21.8 +/- 1.24	NS	14.5 +/- 1.69	NS		
	300 nM	56.0 +/- 1.71	**	28.1 +/- 1.36	*	16.0 +/- 1.20	NS		
NOMO-1 x6 hrs	0 nM	46.5 +/- 1.03	---	29.5 +/- 1.56	---	23.8 +/- 1.94	---	0.2 +/- 0.10	---
	50 nM	48.5 +/- 1.93	NS	31.1 +/- 2.03	NS	20.2 +/- 2.80	NS	0.2 +/- 0.10	NS
	100 nM	45.9 +/- 0.84	NS	29.6 +/- 1.49	NS	24.4 +/- 1.21	NS	0.1 +/- 0.02	NS
	200 nM	31.1 +/- 2.97	***	31.1 +/- 1.28	NS	37.8 +/- 3.19	*	0.1 +/- 0.05	NS
	300 nM	28.9 +/- 1.72	***	30.4 +/- 1.47	NS	40.6 +/- 3.16	**	0.1 +/- 0.06	NS
NOMO-1 x24 hrs	0 nM	48.8 +/- 0.56	---	26.5 +/- 0.95	---	24.0 +/- 0.66	---	0.7 +/- 0.01	---
	50 nM	49.5 +/- 0.35	NS	26.6 +/- 0.86	NS	23.1 +/- 0.44	NS	0.8 +/- 0.04	NS
	100 nM	49.0 +/- 0.57	NS	25.2 +/- 1.59	NS	24.6 +/- 1.10	NS	1.2 +/- 0.04	NS
	200 nM	24.3 +/- 5.65	****	13.2 +/- 2.30	****	47.2 +/- 3.42	****	15.3 +/- 2.45	****
	300 nM	11.6 +/- 0.88	****	9.2 +/- 0.63	****	59.5 +/- 0.63	****	19.8 +/- 0.65	****
NOMO-1 x48 hrs	0 nM	52.8 +/- 0.07	---	27.2 +/- 1.34	---	19.5 +/- 0.94	---	0.5 +/- 0.30	---
	50 nM	51.7 +/- 0.66	NS	26.9 +/- 1.29	NS	20.7 +/- 0.79	NS	0.7 +/- 0.47	NS
	100 nM	51.7 +/- 0.16	NS	26.1 +/- 0.57	NS	21.4 +/- 0.16	NS	0.8 +/- 0.50	NS
	200 nM	37.3 +/- 6.23	**	21.7 +/- 3.17	NS	29.7 +/- 2.73	NS	11.3 +/- 7.55	NS
	300 nM	16.8 +/- 2.49	****	12.4 +/- 2.11	***	36.1 +/- 4.18	**	34.7 +/- 10.22	**

Supplemental Table 3: Median Post-Treatment Survival in the 697 Minimal Residual Disease Model

Experiment #	Vehicle		50 mg/kg UNC2025			75 mg/kg UNC2025		
	Median Survival	n	Median Survival	n	p value	Median Survival	n	p value
1	28.5 days	6	32.5 days	4	0.0279	69.5 days	2	0.0346
2	24 days	15				64 days	14	<0.0001
3	26 days	10	34 days	11	<0.0001	70 days	9	<0.0001

Supplemental Table 4: Brain and Plasma Concentrations in Swiss Albino Mice Following Administration of a Single Oral Dose of UNC2025. Blood samples and brains were collected from male Swiss albino mice after administration of a single dose of UNC2025 by oral gavage. Plasma and brain homogenates were prepared and UNC2025 concentrations were determined by LC-MS/MS. Pharmacokinetic analysis was performed using Phoenix WinNonlin Enterprise v6.3 software.

Dose (mg/kg)	Cmax		Brain/Plasma Ratio	AUC		Brain/Plasma Ratio
	Brain (ng/g)	Plasma (ng/mL)		Brain (hr*ng/g)	Plasma (hr*ng/mL)	
30	272	1718	0.16	1328	8833	0.15
100	643	2868	0.22	6826	25170	0.27

Supplemental Table 5: Median Post-Treatment Survival in the 697 Existent Disease Model

Experiment #	Pre-Treatment Disease Burden (photons/sec)	Vehicle		75 mg/kg UNC2025		
		Median Survival	n	Median Survival	n	p value
1	0.67×10^6	16 days	5	34 days	5	0.0015
2	0.75×10^6	22 days	9	60 days	9	<0.0001
3	1.11×10^6	15 days	9	51 days	4	0.0007
4	1.21×10^6	18 days	8	32.5 days	6	0.0005
5	4.88×10^6	13 days	9	42.5 days	4	0.0020
6	5.81×10^6	13.5 days	10	31 days	9	<0.0001
7	11.29×10^6	11 days	9	36 days	5	0.0007
8	195×10^6	5.5 days	10	20 days	10	<0.0001
9	214×10^6	6 days	10	14.5 days	9	<0.0001
10	213×10^6	5 days	8	12.5 days	8	<0.0001