

**Table S7: IC50 values for venetoclax and S63845 in MM cells without or with simvastatin.**

Viability is normalized to the baseline viability of vehicle or simvastatin alone to determine the IC50 of the BH3 mimetic in the respective condition from a variable slope hill model. MMCLs are ordered by most synergy. Significance is determined by extra sum-of-squares F test with an  $\alpha = 0.0167$  for 3 multiple comparisons. P values are adjusted for multiple comparisons. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , \*\*\*\*  $p < 0.0001$ .

MMCL	[Sim] in $\mu\text{M}$	BH3 Mimetic	BH3 Mimetic IC50 with Veh in nM	BH3 Mimetic IC50 with Sim in nM	P adj
OPM2	3	VEN	>10 $\mu\text{M}$	3838	0.0009 ***
OPM2	1	VEN	>10 $\mu\text{M}$	8505	0.13
L363	10	VEN	>10 $\mu\text{M}$	894.20	< 0.00010 ****
L363	3	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
KMS12PE	10	VEN	7.37	2.56	< 0.00010 ****
KMS12PE	3	VEN	7.37	3.10	< 0.00010 ****
RPMI8226	10	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
RPMI8226	3	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
NCIH929	10	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
NCIH929	3	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
U266	10	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
U266	3	VEN	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
MOLP8	10	VEN	Cannot Fit Hill	Cannot Fit Hill	N/A
MOLP8	3	VEN	Cannot Fit Hill	Cannot Fit Hill	N/A
NCIH929	10	S63845	53.22	8.69	< 0.00010 ****
NCIH929	3	S63845	53.22	16.47	< 0.00010 ****
OPM2	3	S63845	28.50	12.26	< 0.00010 ****
OPM2	1	S63845	28.50	17.81	< 0.00010 ****
L363	10	S63845	25.94	4.72	< 0.00010 ****
L363	3	S63845	25.94	14.21	< 0.00010 ****
MOLP8	10	S63845	12.92	3.59	0.00090 ***
MOLP8	3	S63845	12.92	4.12	0.00090 ***
RPMI8226	10	S63845	93.89	74.64	0.077
RPMI8226	3	S63845	93.89	85.95	0.98
KMS12PE	10	S63845	117.60	75.47	0.016 *
KMS12PE	3	S63845	117.60	93.42	0.41
U266	10	S63845	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.
U266	3	S63845	>10 $\mu\text{M}$	>10 $\mu\text{M}$	n.s.