

Supplemental Material to:

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CD1d induction in solid tumor cells by histone deacetylase inhibitors through inhibition of HDAC1/2 and activation of Sp1

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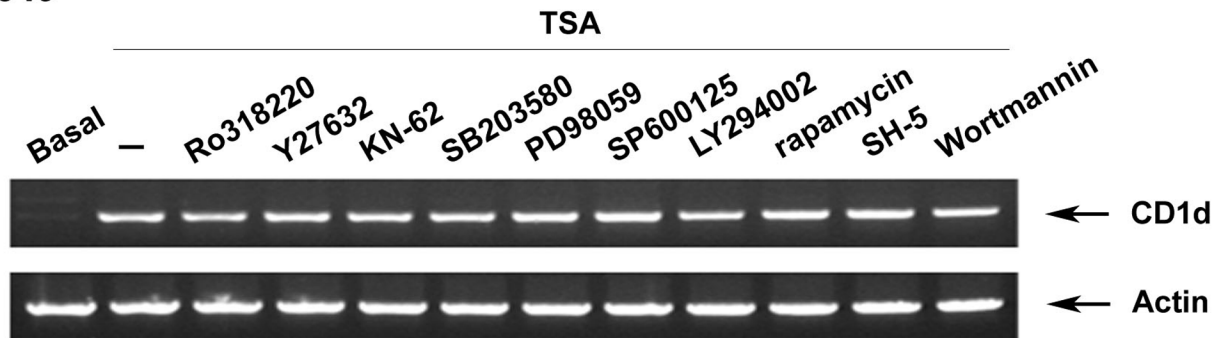
Included: Figures S1 and S2, Table S1

Legends to supplementary figures

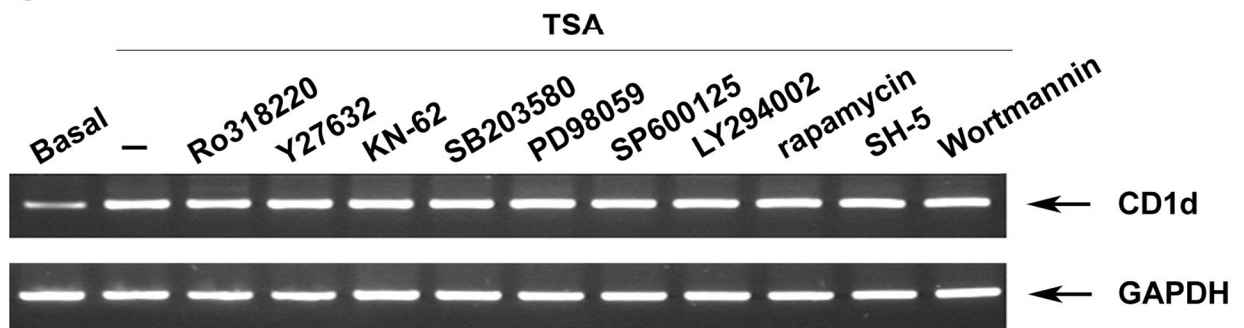
Suppl. Fig. S1. TSA-induced CD1d mRNA expression was not affected by various inhibitors in A549 and TC-1 cells. A549 and TC-1 cells were pretreated with Ro318220 (1 μ M), Y27632 (30 μ M), KN-62 (5 μ M), SB203580 (30 μ M), PD98059 (30 μ M), SP600125 (25 μ M), LY294002 (30 μ M), rapamycin (100 ng/ml), SH-5 (20 μ M), or wortmannin (0.3 μ M) for 1 hour, then treated with TSA (1 μ M) overnight. Total RNA (2 μ g) were used for RT-PCR.

Suppl. Fig. S2. Effects of apicidin alone or combination with MS-275 on CD1d mRNA expression in A549 cells. A549 cells were treated with 0.5, 1, or 2 μ M apicidin in the presence or absence of 1 μ M MS-275 for 24 h. Total RNA (2 μ g) were used for RT-PCR.

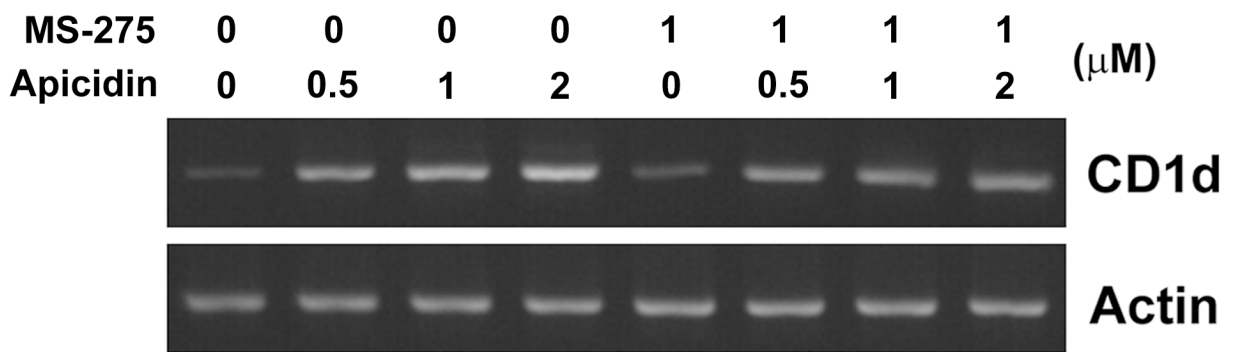
A549



TC-1



suppl. Fig. S1



suppl. Fig. S2

Suppl. Table S1. Comparison of the IC₅₀ values of HDAC inhibitors reported in the literatures.

Compound	HDAC inhibition	IC ₅₀ (nM) reported in the literates						Ranges of IC ₅₀ (nM)
		Ref. 1	Ref. 2	Ref. 3	Ref. 4	Ref. 5	Ref. 6	
TSA	HDAC1	100	1	1.5		2		1-2; 100
	HDAC2					3		3
	HDAC3	300		0.6		4		0.6-4; 300
SAHA	HDAC1		148	119	21	68	100	21-148
	HDAC2					164	440	164-440
	HDAC3		119	106	37	48	20	20-119
MS-275	HDAC1	300	5990	185	180	181	13000	180-300; >5990
	HDAC2					1155	510	510-1155
	HDAC3	8000		201	740	2311	70	70-740; >2311
Apicidin	HDAC1			2		>1000 0	<10	<10; >10000
	HDAC2					120	33.7	33.7-120
	HDAC3			0.7		43	<10	0.7-43

References

- Hu E, Dul E, Sung CM, Chen Z, Kirkpatrick R, Zhang GF, et al. Identification of novel isoform-selective inhibitors within class I histone deacetylases. *J Pharmacol Exp Ther* 2003; 307:720-8.
- Li J, Staver MJ, Curtin ML, Holms JH, Frey RR, Edalji R, et al. Expression and functional characterization of recombinant human HDAC1 and HDAC3. *Life Sci* 2004; 74:2693-705.
- Vannini A, Volpari C, Filocamo G, Casavola EC, Brunetti M, Renzoni D, et al. Crystal structure of a eukaryotic zinc-dependent histone deacetylase, human HDAC8, complexed with a hydroxamic acid inhibitor. *Proc Natl Acad Sci U S A* 2004; 101:15064-9.
- Beckers T, Burkhardt C, Wieland H, Gimmnich P, Ciossek T, Maier T, et al. Distinct pharmacological properties of second generation HDAC inhibitors with the benzamide or hydroxamate head group. *Int J Cancer* 2007; 121:1138-48.
- Khan N, Jeffers M, Kumar S, Hackett C, Boldog F, Khramtsov N, et al. Determination of the class and isoform selectivity of small-molecule histone deacetylase inhibitors. *Biochem J* 2008; 409:581-9.
- Blackwell L, Norris J, Suto CM, Janzen WP. The use of diversity profiling to characterize chemical modulators of the histone deacetylases. *Life Sci* 2008; 82:1050-8.