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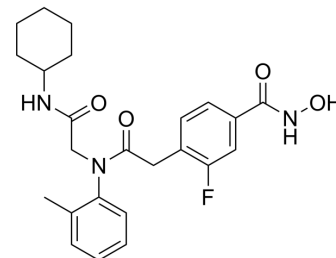
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HDAC6-IN-42

Cat. No.:	HY-161516
Molecular Formula:	C ₂₄ H ₂₈ FN ₃ O ₄
Molecular Weight:	441.5
Target:	HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	HDAC6-IN-42 (compound 2b) is an HDAC6 inhibitor (IC ₅₀ =0.009 μM). HDAC6-IN-42 shows significant anti-leukemia activity and synergistic effect with Decitabine (HY-A0004). HDAC6-IN-42 can be used for the AML research ^[1] .														
IC₅₀ & Target	HDAC6 0.009 μM (IC ₅₀)														
In Vitro	<p>HDAC6-IN-42 increases in antiproliferative activity against the three leukemia cell lines (HAL01: 2.32±0.77 μM, HL60: 2.04±0.62 μM, Jurkat: 3.08±0.59 μM) which is more than five times higher than HPOB^[1].</p> <p>HDAC6-IN-42 shows even higher selectivity for HDAC6 against HDAC2 (IC₅₀=0.787 μM; SIHDAC2/6=87) and HDAC3 (IC₅₀= 0.520 μM; SIHDAC3/6=58) compared to HDAC1 (IC₅₀=0.228 μM; SIHDAC1/6=25)^[1].</p> <p>HDAC6-IN-42 (1, 5 μM; 48 h) exhibits any cytotoxic activity against healthy fibroblasts and exhibits a significant increase in the percentage of late apoptotic cells^[1].</p> <p>HDAC6-IN-42 excels significantly in inducing specific drug synergy with Decitabine (HY-A0004) against AML cells^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HAL01 (B-cell acute lymphoblastic leukemia or B-ALL), HL60 (acute myeloid leukemia or AML), and Jurkat (T-cell acute lymphoblastic leukemia or T-ALL)</td> </tr> <tr> <td>Concentration:</td> <td></td> </tr> <tr> <td>Incubation Time:</td> <td></td> </tr> <tr> <td>Result:</td> <td>Exhibited antiproliferative activities in the single digit micromolar range against all three cell lines and thus exceeded the activity of HPOB.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>leukemic cell lines (K562, DND41, Jurkat, SUPB15, REH, Kasumi 2, 697, PEER, HAL01, MV4-11, MOLM13 and HL60) and healthy fibroblasts (F107 and F188)</td> </tr> <tr> <td>Concentration:</td> <td>0.2, 0.4, 0.8, 1.3 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> </table>	Cell Line:	HAL01 (B-cell acute lymphoblastic leukemia or B-ALL), HL60 (acute myeloid leukemia or AML), and Jurkat (T-cell acute lymphoblastic leukemia or T-ALL)	Concentration:		Incubation Time:		Result:	Exhibited antiproliferative activities in the single digit micromolar range against all three cell lines and thus exceeded the activity of HPOB.	Cell Line:	leukemic cell lines (K562, DND41, Jurkat, SUPB15, REH, Kasumi 2, 697, PEER, HAL01, MV4-11, MOLM13 and HL60) and healthy fibroblasts (F107 and F188)	Concentration:	0.2, 0.4, 0.8, 1.3 μM	Incubation Time:	24 h
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Concentration:															
Incubation Time:															
Result:	Exhibited antiproliferative activities in the single digit micromolar range against all three cell lines and thus exceeded the activity of HPOB.														
Cell Line:	leukemic cell lines (K562, DND41, Jurkat, SUPB15, REH, Kasumi 2, 697, PEER, HAL01, MV4-11, MOLM13 and HL60) and healthy fibroblasts (F107 and F188)														
Concentration:	0.2, 0.4, 0.8, 1.3 μM														
Incubation Time:	24 h														

Result:	Increased α -tubulin acetylation while affecting H3 acetylation to a lesser extent.
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REFERENCES

[1]. Tretbar M, et al. Preferential HDAC6 inhibitors derived from HPOB exhibit synergistic antileukemia activity in combination with decitabine[J]. European Journal of Medicinal Chemistry, 2024: 116447.

Caution: Product has not been fully validated for medical applications. For research use only.

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