# HDAC8-IN-3

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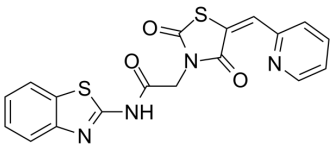
| **Cat. No.:** | HY-147934 |
| **CAS No.:** | 2432825-93-7 |
| **Molecular Formula:** | $C_{18}H_{12}N_4O_3S_2$ |
| **Molecular Weight:** | 396.44 |
| **Target:** | HDAC; Apoptosis |
| **Pathway:** | Cell Cycle/DNA Damage; Epigenetics; Apoptosis |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

**Description**

HDAC8-IN-3 (compound P19) is a potent HDAC8 inhibitor with $IC_{50}$ value of 9.3 μM and produces thermal stabilization. HDAC8-IN-3 has cytotoxicity and induces apoptosis in leukemic cell lines[1].

**$IC_{50}$ & Target**

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|---|---|---|---|
| HDAC8<br>9.3 μM ($IC_{50}$) | HDAC6<br>17 μM ($IC_{50}$) | HDAC2<br>41 μM ($IC_{50}$) | HDAC1<br>>50 μM ($IC_{50}$) |
| HDAC3<br>>50 μM ($IC_{50}$) | HDAC4<br>>50 μM ($IC_{50}$) | HDAC5<br>>50 μM ($IC_{50}$) | HDAC8<br>>50 μM ($IC_{50}$) |

**In Vitro**

HDAC8-IN-3 (compound P19) (5-200 μM, 48 hours; HEK293T cells) has cytotoxicity in leukemic cell lines[1].
HDAC8-IN-3 (compound P19) (50 μM) inhibits glucose transporter 1 (GLUT1)-mediated glucose transport by down-regulating GLUT1 expression ($IC_{50}$ = 28.2 μM)[1].
HDAC8-IN-3 (compound P19) (79.9 μM; 24 hours) can induce apoptotic death in the CEM cell line[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

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| Cell Line: | K562, KCL22 and CEM leukemia cells. |
| Concentration: | 50 μM |
| Incubation Time: | 48 hours |
| Result: | Inhibited with $IC_{50}$ values of 79.9, 85.4 and 43.2 μM for CEM, K562 and KCL22 cells, respectively. |

Apoptosis Analysis[1]

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| Cell Line: | CEM cells |
| Concentration: | 79.9 μM |
| Incubation Time: | 24 hours |
| Result: | The percentage of apoptotic cells was recorded as 60.97%. |

## REFERENCES

[1]. Upadhyay N, et al. Discovery of novel N-substituted thiazolidinediones (TZDs) as HDAC8 inhibitors: in-silico studies, synthesis, and biological evaluation. Bioorg Chem. 2020 Jul;100:103934.



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