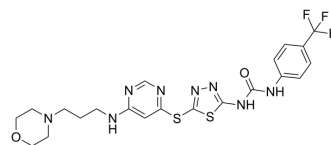


Anticancer agent 164

| | |
|--------------------|---|
| Cat. No.: | HY-128634 |
| CAS No.: | 2235393-30-1 |
| Molecular Formula: | C ₂₁ H ₂₃ F ₃ N ₈ O ₂ S ₂ |
| Molecular Weight: | 540.58 |
| Target: | Apoptosis; PI3K; MEK |
| Pathway: | Apoptosis; PI3K/Akt/mTOR; MAPK/ERK Pathway |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |



BIOLOGICAL ACTIVITY

| | |
|--------------------|---|
| Description | CML-IN-1 (compound 7) is a potent anticancer agent. CML-IN-1 displays very good induced-apoptosis effect for human chronic myeloid leukemia (CML) cell line K562. CML-IN-1 exerts its effect via a significantly reduced protein phosphorylation of PI3K/Akt signal pathway. CML-IN-1 (compound 4) also inhibits cell proliferation by suppressing the MEK/ERK signaling pathway in colorectal cancer ^{[1][2]} . |
| In Vitro | CML-IN-1 (compound 7) exhibits the least cellular toxicity and better biological activity in cellular assays (K562, IC ₅₀ : 0.038 μM) ^[1] . CML-IN-1 (compound 4) significantly inhibits HCT116 cell proliferation with IC ₅₀ values of 8.04 ± 0.94 μM after 48 h and 5.52 ± 0.42 μM after 72 h, respectively ^[2] . CML-IN-1 (compound 4) inhibits colony formation, migration, and invasion of HCT116 cells in a dose-dependent manner, as well as inducing cell apoptosis and arresting the cell cycle in the G2/M phase ^[2] . CML-IN-1 (compound 4) inhibits the activation of the MEK/ERK signaling in HCT116 cells ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

REFERENCES

[1]. Li W, et al. Design and synthesis of novel 1-phenyl-3-(5-(pyrimidin-4-ylthio)-1,3,4-thiadiazol-2-yl)urea derivatives with potent anti-CML activity throughout PI3K/AKT signaling pathway. *Bioorg Med Chem Lett*. 2019 Jul 15;29(14):1831-1835.

[2]. Li W, et al. A novel 4-(1,3,4-thiadiazole-2-ylthio)pyrimidine derivative inhibits cell proliferation by suppressing the MEK/ERK signaling pathway in colorectal cancer. *Acta Pharm*. 2023 Sep 14;73(3):489-502.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA