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#66672 Store at -20C
10058-F4
5 mg

For Research Use Only. Not for Use in Diagnostic Procedures.

Background

The small-molecule 10058-F4 inhibits c-Myc, a transcriptional regulator involved in cell proliferation, differentiation, and apoptosis. Dysregulation of the oncoprotein c-Myc is common in human cancers. 10058-F4 inhibits transactivation of gene expression by c-Myc-Max heterodimers by disrupting the association between c-Myc and the transcription factor Max (1). 10058-F4 treatment of acute myeloid leukemia cells inhibited c-Myc expression and induced apoptosis and cell arrest at G0/G1 (2). In a mouse neuroblastoma model, 10058-F4 inhibited transactivation by N-Myc-Max, resulting in cell cycle arrest, apoptosis, and tumor growth reduction (3). Ovarian cancer cells treated with 10058-F4 displayed reduced cell proliferation and enhanced effects of chemotherapeutic drugs. The 10058-F4 inhibitor likely upregulates FOXO transcription factors and downstream genes involved in ovarian G1 cell cycle arrest, apoptosis, and autophagic cell death (4). 10058-F4 promoted increased expression of thioredoxin-interacting protein (TXNIP) in triple-negative breast cancer drug-resistant cells, which promoted reactive oxygen species synthesis and reversed doxorubicin-induced chemotherapy resistance (5).

Molecular Formula

C₁₂H₁₁NOS₂

Molecular Weight

249.4 g/mol

Purity

>98%

CAS

403811-55-2

Solubility

Soluble in DMSO at 60 mg/mL or ethanol at 20 mg/mL.

Storage

Store lyophilized at room temperature, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use

10058-F4 is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 1 mg of powder in 0.40 mL of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Yin, X. et al. (2003) *Oncogene* 22, 6151-9.
2. Huang, M.J. et al. (2006) *Exp Hematol* 34, 1480-9.
3. Zirath, H. et al. (2013) *Proc Natl Acad Sci U S A* 110, 10258-63.
4. Ghaffarnia, R. et al. (2021) *Eur J Pharmacol* 908, 174345.
5. Chen, Y. et al. (2022) *Cell Death Dis* 13, 338.

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey **Vir:** Virus **Mi:** Mink **C:** Chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** Zebrafish **B:** Bovine **Dg:** Dog **Pg:** Pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** Horse **GP:** Guinea Pig **Rab:** Rabbit **G:** Goat **All:** All Species Expected

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