Product Datasheet

AVN944

Catalog No. **BP-02481** · CAS **297730-17-7** · Form **free base** · Physical state **solid** · Color **White to light yellow** · Version **1.0** · Revision **2026-09-10**

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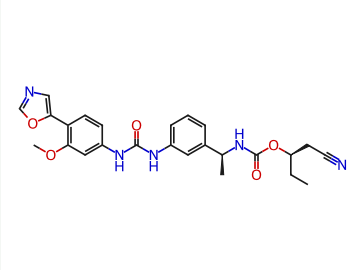
Target	Research area
Arenavirus; DNA/RNA Synthesis; Apoptosis; Caspase; Bcl-2 Family	**Infection; Cancer**

Molecular formula	$C_{25}H_{27}N_5O_5$
Molecular weight	**477.5124**

STRUCTURE



DESCRIPTION

AVN-944 (VX-944) is an orally active, potent, selective, noncompetitive and specific inhibitor of IMPDH (inosine monophosphate dehydrogenase). AVN-944 is an essential rate-limiting enzyme in de novo guanine nucleotide synthesis. AVN-944 is also an inhibitor of arenavirus RNA synthesis, and blocks arenavirus infection. AVN-944 has broad anti-cancer activities, and can be used for multiple myeloma (MM) and acute myeloid leukemia (AML) research .

BIOLOGICAL ACTIVITY

In Vitro

AVN-944 (0-1 μM, 48 h) inhibits growth of human multiple myeloma (MM) cell lines in a dose-dependent manner.

AVN-944 (800 nM, 0-72 h) induces apoptosis in MM cell lines via a caspase-independent, Bax/AIF/Endo G pathway.

AVN-944 (0-200 nM) enhances the cytotoxicity of Doxorubicin (HY-15142A) and Melphalan (HY-17575).

AVN-944 inhibits the proliferation of the human MV-4-11 and murine Ba/F3-Flt3-ITD-dependent cell lines with IC50 values of 26 and 30 nM, respectively.

AVN-944 (0-32 μM, 48 h) shows good activity against arenavirus infection at low doses (7.5?μM) with less cytotoxicity.

AVN-944 (0-6.4 μM, 48 h) does not reduce the viability of peripheral blood mononuclear cells (PBMNCs).

In Vivo

AVN-944 (0-150 mg/kg, Orally, twice daily) significantly increases the median survival time of leukemia model mice.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1].Zimmermann AG, et al. Inosine-5'-monophosphate dehydrogenase: regulation of expression and role in cellular proliferation and T lymphocyte activation. Prog Nucleic Acid Res Mol Biol. 1998;61:181-209.

[2].Huang M, et al. Guanine nucleotide depletion inhibits pre-ribosomal RNA synthesis and causes nucleolar disruption. Leuk Res. 2008 Jan;32(1):131-41.

[3].Floryk D, et al. Antiproliferative effects of AVN944, a novel inosine 5-monophosphate dehydrogenase inhibitor, in prostate cancer cells. Int J Cancer. 2008 Nov 15;123(10):2294-302.

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