

Product Data Sheet

Product Name: LMTK3 Inhibitor C28

Cat. No.: GC91967

Chemical Properties

Cas. No. 2764850-23-7

Chemical Name 6-(4-pyridinyl)-3-[3-(trifluoromethoxy)phenyl]-imidazo[1,2-b]pyridazine

SMILES FC(F)(OC1=CC=CC(C2=CN=C3C=CC(C4=CC=NC=C4)=NN32)=C1)F

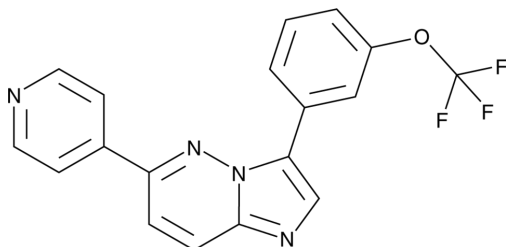
Formula $C_{18}H_{11}F_3N_4O$ M.Wt 356.3

Solubility DMSO: Slightly soluble: 0.1-1 mg/ml, Ethanol: Slightly soluble: 0.1-1 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

LMTK3 inhibitor C28 is a multi-kinase inhibitor.¹ It inhibits lemur tyrosine kinase 3 (LMTK3), CDC-like kinase 2 (Clk2), dual-specificity tyrosine phosphorylation-regulated kinase 1 α (DYRK1 α), homeodomain-interacting protein kinase 2 (HIPK2), and IL-1 receptor-associated kinase 4 (IRAK4; IC₅₀s = 67, 5, 6, 48, and 41 nM, respectively), among others. LMTK3 inhibitor C28 is selective for these kinases over a panel of 122 kinases at 1 μM . It induces proteasomal degradation of LMTK3 in MCF-7, T47D, and MDA-MB-231 breast cancer cells when used at concentrations of 5 or 10 μM . LMTK3 inhibitor C28 (10 μM) reduces the levels of IRAK4, estrogen receptor α (ER α),

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phosphorylated tropomyosin-related kinase A (TrkA), and HIPK2 in T47D cells. It induces apoptosis in MCF-7, T47D, and MDA-MB-231 cells when used at a concentration of 10 μ M. *In vivo*, LMTK3 inhibitor C28 (10 mg/kg per day) reduces tumor growth and volume in an MDA-MB-231 mouse xenograft model.

References:

[1]. Ditsiou, A., Cilibrasi, C., Simigdala, N., et al. The structure-function relationship of oncogenic LMTK3. *Sci. Adv.* 6(46):eabc3099 (2020).

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