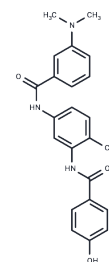


ZM 336372

Chemical Properties

CAS No. : 208260-29-1
 Formula: C₂₃H₂₃N₃O₃
 Molecular Weight: 389.45
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

| | |
|---------------|--|
| Description | ZM 336372 is a potent and selective c-Raf inhibitor. |
| Targets(IC50) | Apoptosis,Raf |
| In vivo | 1 μ M ZM 336372 abrogated the up-regulation of eNOS after hydrogen peroxide treatment.ZM 336372 induced inhibition of proliferation, inhibition of hormone secretion and up-regulation of cell cycle inhibitors in a dose-dependent manner in HepG2.ZM 336372 acted selectively on C-Raf 10-fold compared to B-Raf.ZM 336372 inhibited proliferation and suppressed NE vasoactive peptide in pheochromocytoma cells.ZM 336372 inhibited proliferation of pheochromocytoma cells. ZM 336372 weakly inhibited SAPK2a/p38 α and SAPK2b/p38 β with an IC50 of 2 μ M, and was more selective for C-Raf than for 17 other protein kinases, including PKA, PKC, AMPK, p42 MAPK, MKK1, SAPK1/JNK, and CDK1, at a concentration of up to 50 μ M. ZM 336372 does not prevent growth factor or fobol ester-induced activation of MKK1 or p42 MAPK/ERK2. By inhibiting the MAPK cascade, protein kinase C or phosphatidylinositol 3-kinase did not prevent ZM 336372-induced activation of c-Raf. ZM 336372 treatment induced the activation of c-Raf and B-Raf isoforms > 100, but it did not trigger any activation of MKK1 or p42 MAPK/ERKP or induce any increase in GTP loading of Ras. , suggesting that the feedback control loop Raf isoform inhibits its own activation, and thus the inhibition is always counteracted by reactivation.ZM 336372 also induces apoptosis in pancreatic cancer cell lines by inhibiting glycogen synthase kinase-3 β via phosphorylation of GSK-3 β on Ser 9. |
| Kinase Assay | In vitro kinase assay: c-Raf kinase activity is assayed directly in SI9 cell lysates. Human c-Raf is activated in Sf9 cells by cotransfection from baculovirus vectors containing DNA encoding v-Ras and Lck in the absence of ZM 336372. The cell lysates are then assayed for c-Raf activity in the presence of increasing concentrations of ZM 336372. |
| Cell Research | Cells are exposed to various concentrations of ZM 336372 for 48 and 72 hours. After incubation, the medium is removed and cells are trypsinized. Cells are incubated on ice, and 2.5 μ g/mL propidium iodide is added 5 minutes before flow cytometry. Data is acquired using a FACSCalibur benchtop flow cytometer using CellQuest acquisition and analysis software. Cytotoxicity is done using Cell Titer Glo Assay. Cell proliferation is measured using MTT assay.(Only for Reference) |

Solubility Information

| | |
|---------------------|--|
| Solubility | H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 2 mg/mL (5.14 mM),Sonication is recommended. DMSO: 72 mg/mL (184.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.14 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 2.5677 mL | 12.8386 mL | 25.6772 mL |
| 5 mM | 0.5135 mL | 2.5677 mL | 5.1354 mL |
| 10 mM | 0.2568 mL | 1.2839 mL | 2.5677 mL |
| 50 mM | 0.0514 mL | 0.2568 mL | 0.5135 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Hall-Jackson CA, et al. Chem Biol, 1999, 6(8), 559-568.
Wartenberg M, et al. Int J Cancer, 2003, 104(3), 274-282.
Van Gompel JJ, et al. Mol Cancer Ther, 2005, 4(6), 910-917.
Kappes A, et al. J Surg Res, 2006, 133(1), 42-55.
Deming D, et al. J Gastrointest Surg, 2008, 12(5), 852-857.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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