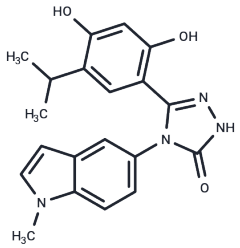
# Data Sheet (Cat.No.T2309)

TargetMol

## Ganetespib

### Chemical Properties



CAS No. : 888216-25-9

Formula: C20H20N4O3

Molecular Weight: 364.4

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

### Biological Description

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|---|---|
| Description | Ganetespib (STA-9090) is a synthetic small-molecule inhibitor of heat shock protein 90 (Hsp90), exhibiting potential antineoplastic activity. |
| Targets(IC50) | Apoptosis,HSP,HIF |
| In vitro | Ganetespib was able to exhibit cytotoxicity at the nanomolar level, inhibiting cell proliferation while inducing apoptosis in a variety of human anti-receptor tyrosine kinase inhibitor and tapepermycin-resistant cancer cell lines. In MG63 cell line (IC50=43 nM), Ganetespib inhibited cell growth. In C2 (IC50=19 nM) and BR canine malignant mast cells (IC50=4 nM), Ganetespib induced apoptosis. |
| In vivo | Ganetespib was able to exhibit cytotoxicity at the nanomolar level, inhibiting cell proliferation while inducing apoptosis in a variety of human anti-receptor tyrosine kinase inhibitor and tapepermycin-resistant cancer cell lines. In MG63 cell line (IC50=43 nM), Ganetespib inhibited cell growth. In C2 (IC50=19 nM) and BR canine malignant mast cells (IC50=4 nM), Ganetespib induced apoptosis. |
| Kinase Assay | Exponentially growing cells are processed in lysis buffer (20 mM HEPES, pH 7.4, 1 mM EDTA, 5 mM MgCl2, 100 mM KCl) and incubated with increasing concentrations of 17-AAG or ganetespib for 30 min at 4°C, and incubated with biotin-GM linked to Dynabeads MyOne Streptavidin T1 magnetic beads for 1 h at 4°C. Beads are washed three times in lysis buffer and heated for 5 min at 95°C in SDS-PAGE sample buffer. Samples are resolved on 4-12% Bis-Tris gradient gel and Western blots are performed using an anti-HSP90 antibody. |
| Cell Research | A total of 1.5 × 103 OSA cells are seeded in 96-well plates in 10% serum-containing complete medium and incubated overnight to determine the 50% inhibitory concentrations. Plates are, harvested at day 5 following 0.001, 0.005, 0.01, 0.05, 0.1, 0.5 and 1 μM Ganetespib, treatment and analyzed. Fluorescence measurements are made using a plate reader with excitation at 485 nm and emission detection at 530 nm. Relative cell number is calculated as a percentage of the control wells: absorbance of sample/absorbance of DMSO treated cells × 100.(Only for Reference) |

### Solubility Information

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|---|---|
| Solubility | Ethanol: < 1 mg/mL (insoluble or slightly soluble),<br>DMSO: 40 mg/mL (109.77 mM),Sonication is recommended.<br>H2O: < 1 mg/mL (insoluble or slightly soluble),<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.7442 mL | 13.7212 mL | 27.4424 mL |
| 5 mM | 0.5488 mL | 2.7442 mL | 5.4885 mL |
| 10 mM | 0.2744 mL | 1.3721 mL | 2.7442 mL |
| 50 mM | 0.0549 mL | 0.2744 mL | 0.5488 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.

Reference

McCleese Jk, et al. Int J Cancer. 2009, 125(12), 2792-2801.
Peng Y C, Wang S, Zhang Y, et al. Hsp90β inhibitors prevent GLT-1 degradation but have no beneficial efficacy on absence epilepsy. Journal of Asian Natural Products Research. 2018 Nov 17:1-11
Qiu C, Shen X, Lu H, et al.Combination therapy with HSP90 inhibitors and piperlongumine promotes ROS-mediated ER stress in colon cancer cells.Cell Death Discovery.2023, 9(1): 375.
Wang Y, et al. Curr Opin Investig Drugs. 2010 , 11(12), 1466-1476.
Ying W, et al. Mol Cancer Ther. 2012, 11(2), 475-484.
Huang Z, Li S, Zhong L, et al.Effect of resveratrol on herpesvirus encephalitis: evidences for its mechanisms of action.Phytomedicine.2024: 155476.
Lin TY, et al. Exp Hematol. 2008, 36(10), 1266-1277.
Peng Y C, Wang S, Zhang Y, et al. Hsp90β inhibitors prevent GLT-1 degradation but have no beneficial efficacy on absence epilepsy[J]. Journal of Asian natural products research. 2018 Nov 17:1-11.