Product Data Sheet

Chemical Properties

Product Name: AMG 925
Cas No.: 1401033-86-0
M.Wt: 471.55
Formula: C26H29N7O2

Chemical Name:

Canonical SMILES: C[\text{C}@[\text{H}]1\text{CC}[\text{C}@[\text{H}]\text{N}2\text{C}3=\text{CN}=\text{CC}=\text{C}3\text{C}4=\text{CN}=\text{C}(\text{NC}5=\text{NC}6=\text{C}(\text{CN}(\text{C}(\text{CO})=\text{O})\text{CC}6)=\text{C}(\text{C}5)=\text{N}=\text{C}24)\text{CC}1

Solubility: insoluble in DMSO
Storage: Store at -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.

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

Biological Activity

Targets: Cell Cycle/Checkpoint
Pathways: Cyclin-Dependent Kinases

Description:
AMG 925 is a dual inhibitor of FLT3/CDK4 kinase with IC50 values of 2nM and 3nM, respectively [1]. AMG 925 is a potent, selective, and orally available FLT3/CDK4 dual inhibitor. It also inhibits CDK6 potently in kinase assay. In acute myeloid leukemia (AML) cell lines MOLM13 and Mv4-11, AMG 925 inhibits cell growth (IC50 values of 19nM and 18nM, respectively) through inhibiting P-FLT3 and P-STAT5 and inducing apoptosis. FLT3 mutants cause resistance to the current FLT3 inhibitors. AMG 925 is reported to inhibit cell growth in AML cells with FLT3 mutants FLT3-D835Y and
FLT3-D835V. In AML tumor-bearing mice, administration of AMG 925 shows inhibition of P-STAT5 and P-RB as well as cell growth both in subcutaneous MOLM13 xenograft tumor model and systemic MOLM13-Luc xenograft tumor model. AMG 925 is also reported to have antitumor activity in a dose-dependent manner in the RB-positive Colo205 colon adenocarcinoma xenograft model [1].

Reference:

Protocol

Cell experiment:

Cell lines
MOLM13, MOLM13SR, and U937 cells

Preparation method
The solubility of this compound in DMSO is 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.

Reacting conditions

Applications
AMG 925 is an effective and orally bioavailable dual inhibitor of FLT3 and CDK4. AMG 925 inhibits the proliferation of a batch of human tumor cell lines, including Colo205 (Rb+) and U937 (FLT3WT) cells. AMG 925 also induced apoptosis in FLT3 mutant AML cells, including MOLM13 (FLT3ITD) and MOLM13 (FLT3ITD, D835Y) cells.

Animal experiment [3]:

Animal models
NCR nude mice

Dosage form
Oral administration with 12.5, 25, 37.5, and 50 mg/kg. Twice a day for 10 consecutive days.

Applications
AMG 925 inhibited the growth of AML xenograft tumor in a dose-dependent manner without significant body weight loss. The concentrations of AMG 925 in plasma correlated with the inhibition of RB and STAT5 phosphorylation, which are markers for inhibition of CDK4 and FLT3, respectively.

Other notes
Please test the solubility of all compounds indoor, and the actual
solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.