Product Data Sheet

Chemical Properties

Product Name: Fostamatinib (R788)
Cas No.: 901119-35-5
M.Wt: 580.46
Formula: C23H26FN6O9P

Chemical Name: [6-[[5-fluoro-2-(3,4,5-trimethoxylanilino)pyrimidin-4-yl]amino]-2,2-di methyl-3-oxopyrido[3,2-b][1,4]oxazin-4-yl]methyl dihydrogen phosphate
Canonical SMILES: CC1(C(=O)N(C2=C(O1)C=CC(=N2)NC3=NC(=NC=C3F)NC4=CC(=C(C(=C4)OC)OC)OC)COP(=O)(O)(O)O)

Solubility: ≥100.4mg/mL 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: Tyrosine Kinase
Pathways: Spleen Tyrosine Kinase (Syk)

Description:
Fostamatinib is a small molecule inhibitor of spleen tyrosine kinase (Syk) with IC50 value of 41nM [1]. Fostamatinib is an orally bioavailable prodrug of R406. It is developed for the treatment of autoimmune diseases. The effective metabolite of fostamatinib, R406, is an ATP-competitive inhibitor of Syk with Ki value of 30nM. R406 also inhibits the activity of other kinases including...
Flt3, Lyn (IC50=63nM) and Lck (IC50=37nM). It is found that R406 inhibits both BCR and FcR mediated responses in vitro. Besides that, R406 also shows effects in other cells types and signalling pathways. In the in vivo assay, fostamatinib shows to be highly active to inhibit FcR-mediated signaling in various animal models of allergy, autoimmunity and inflammation. Moreover, fostamatinib also exerts efficacy in SLE animal models. Treatment of fostamatinib suppresses the established renal and skin disease and reduces lymphadenopathy in the MRL/lpr strain [1].

Reference:

Protocol

Cell experiment:

Cell lines: Diffuse large B-cell lymphoma (DLBCL) cell lines

Preparation method: The solubility of this compound in DMSO is > 100.4mg/mL. 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: R788 was a prodrug of the active metabolite. R406 induced apoptosis of the majority of examined DLBCL cell lines. In R406-sensitive DLBCL cell lines, R406 specifically inhibited both tonic- and ligand-induced BCR signaling (autophosphorylation of SYK525/526 and SYK-dependent phosphorylation of the B-cell linker protein [BLNK]).

Animal experiment [3]:

Animal models: Eµ- TCL1 transgenic mouse model of CLL, B6/C3H F1 mice

Dosage form: Intraperitoneal administration, 18 consecutive days at a daily dose of 80 mg/kg

Applications: R788 (80 mg/kg/d) inhibited the growth of adoptively transferred TCL1 leukemias in vivo. R788 treatment administered from days 4 to 25 after adoptive transfer significantly prevented the outgrowth of leukemias. Treatment with R788 significantly prolonged the survival of the animals. In B6/C3H mice, after 4 days of treatment animals receiving R788 showed a greater rise in the number of circulating malignant lymphocytes than controls. In B6/C3H F1 mice, treatment...
with R788 for 7 days blocked BCR signaling and inhibited leukemic cell survival and proliferation in vivo. In Eμ-TCL1 transgenic mouse model of CLL, R788 inhibited the growth of spontaneously developing TCL1 leukemias.

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.