Chemical Properties

Product Name: TCS 359  
Cas No.: 301305-73-7  
M.Wt: 360.43  
Formula: C18H20N2O4S  
Chemical Name: 2-[(3,4-dimethoxybenzoyl)amino]-4,5,6,7-tetrahydro-1-benzothiophene-3-carboxamide  
Canonical SMILES: COC1=C(C=C(C=C1)C(=O)NC2=C(C3=C(S2)CCCC3)C(=O)N)OC  
Solubility: \( \geq 9\text{mg/mL} \) in DMSO  
Storage: Store at -20\(^\circ\) C  
General tips: For obtaining a higher solubility, please warm the tube at 37\(^\circ\) C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20\(^\circ\) 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: FLT3  
Description:  
TCS 359 is a potent inhibitor against the fms-like tyrosine kinase-3 (FLT3) [1] [2] with an IC50 value of 0.042 ±0.03 \(\mu\)M [2].  
FLT3 is a receptor tyrosine kinase. Via hematopoietic regulation, it plays its important role in the pathogenesis of acute myeloid leukemia (AML) [3].  
To the proliferation of MV4-11 cell line (a human acute myeloid leukemia cell line expressing a constitutively activated mutant FLT3), the IC50 of TCS 359 was 0.34 \(\mu\)M [2].  
TCS 359 blocked the ability of FLT3 ligand to promote the development of two-cell-embryos to the hatched blastocyst stage in mice. TCS 359 also decreased the expression of FLT3 ligand in
early embryos after the four-cell stage. Without exogenous FLT3 ligand, TCS 359 did not affect embryo development [4]. Treated with another FLT3 inhibitor SU5416, 21 of 22 analyzed patients expressed FLT3 protein, 17 expressed phosphorylated FLT3 at baseline. Among these 17 patients expressed phosphorylated FLT3, inhibition of more than 50% relative to baseline was apparent in seven cases, while inhibition ranged from 20-50% relative to baseline was apparent in an additional three cases. FLT3 phosphorylation was detected in whole blood lysates in the majority of AML patients treated with SU5416. Activated FLT3 was detectable in bone marrow aspirates from approximately 50% AML patients [5].

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. Shortterm 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.