Product Data Sheet

Product Name: STAT3-IN-15
Cat. No.: GC71187

Chemical Properties

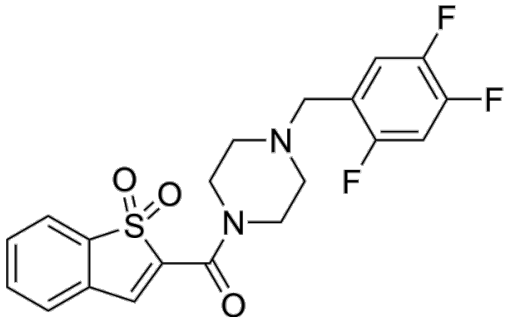
Cas. No.

Formula	$C_{20}H_{17}F_3N_2O_3S$	M.Wt	422.42
Solubility	DMSO : 100 mg/mL (236.73 mM; Need ultrasonic; Hygroscopic DMSO has a significant impact on the solubility of product, please use newly opened DMSO)	Storage	-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.

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

Structure



Background

STAT3-IN-15 is a potent and orally active STAT3 inhibitor against idiopathic pulmonary fibrosis (IPF). STAT3-IN-15 inhibits STAT3 phosphorylation. STAT3-IN-15 also inhibits the migration and deformation of epithelial cells induced by TGF-β1 and inhibit epithelial-mesenchymal transition (EMT).

Caution: Product has not been fully validated for medical applications. For research use only.
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STAT3-IN-15 (compound 10k) inhibits NIH-3T3 cell proliferation with an IC_{50} of 0.47 μM[1].

STAT3-IN-15 forms hydrogen bonds with Lys591 and Ser636, occupying the pY subpocket of STAT3[1].

STAT3-IN-15 (0-100 nM, 72 h) inhibits fibroblast activation and proliferation[1].

STAT3-IN-15 (50 nM, 24 h) inhibited TGF-β1 (5 ng/mL)-induced activation of NIH-3T3 cells [1].

STAT3-IN-15 (200 nM, 24 h) blocks TGF-β1 induced EMT process in A549 cells, determined by morphological changes[1].

STAT3-IN-15 (compound 10k) (30 and 60 mg/kg, intragastric administration) alleviates Bleomycin.html" class="link-product" target="_blank"> Bleomycin -induced pulmonary fibrosis in mouse[1].

References:

[1]. Wang Y, et al. Discovery of the novel Benzo[b]thiophene 1,1-dioxide derivatives as a potent STAT3 inhibitor against idiopathic pulmonary fibrosis. Eur J Med Chem. 2022 Nov 28;246:114953.

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