
Product Data Sheet

Product Name: SP-146
Cat. No.: GC18703

Chemical Properties

Cas. No.

SMILES O=C(NC1=CC=CC(NC2=C3C=CC(C4=CN(C)N=C4)=CC3=NC=N2)=C1)NC5=CC=CC(F)=C5

Formula C25H20FN7O M.Wt 453.47

Solubility Storage Store at -20°C

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

Structure

Background

SP-146 is a highly potent, selective and non-ATP-competitive Aurora B inhibitor with an IC₅₀ of 0.316 nM, and shows >2000 fold selectivity against FLT3 (IC₅₀=1475.6 nM) and KIT (IC₅₀=1307.6 nM). SP-146 is not promiscuous, rather selective for a few cancer cells, including MDA-MD-468 (GI₅₀=107 nM). SP-146 can be used for the research of triple negative breast cancer (TNBC).

SP-146 (0-1 μM; 24 hours) is not promiscuous, rather selective for a few cell lines, it inhibits MDA-MB-468, CCRF-CEM, COLO 205 and A498 cell growth with GI₅₀ values of 107 nM, 47.4 nM, 50.3 nM and 53.2 nM, respectively[1].

SP-146 (63.2 nM) inhibits Aurora B activity in H460 cells by the characteristics of increased DNA content, and it increases cell volume with enormous nucleus[1].

SP-146 (0-2 μM) inhibits Aurora B enzymatic activity with an IC₅₀ of 0.316 nM and inhibits Aurora A with observed IC₅₀ value of 18.975 nM. SP-146 shows >2000 fold selectivity against FLT3 (IC₅₀=1475.6 nM) and KIT (IC₅₀=1307.6 nM). Meanwhile, it exhibits inhibitory effects on other receptor tyrosine kinases (RTKs) namely EGFR, RET and HER2 with IC₅₀ value ≥2 μM[1].

Reference

[1]. Naga Rajiv Lakkaniga, et al. Discovery of SP-96, the first non-ATP-competitive Aurora Kinase B inhibitor, for reduced myelosuppression. Eur J Med Chem. 2020 Jul 12;203:112589.

Caution: Product has not been fully validated for medical applications. For research use only.

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