

Product Data Sheet

Product Name: GNF 2
Cat. No.: GC10858

Chemical Properties

Cas. No. 778270-11-4

Chemical Name 3-[6-[4-(trifluoromethoxy)anilino]pyrimidin-4-yl]benzamide

SMILES C1=CC(=CC(=C1)C(=O)N)C2=CC(=NC=N2)NC3=CC=C(C=C3)OC(F)(F)F

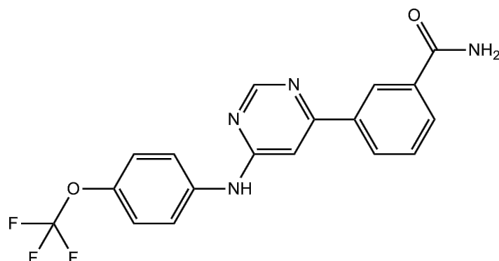
Formula $C_{18}H_{13}F_3N_4O_2$ M.Wt 374.32

Solubility $\geq 18.7\text{mg/mL}$ 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.

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

Structure



Background

GNF-2 is a highly selective non-ATP competitive inhibitor of Bcr-Abl with an IC_{50} value of 100 to 300 nM in various cell lines.

BCR-ABL gene is fused by the BCR and ABL1 genes [1]. BCR-ABL increased production of tyrosine kinase and played an essential role in the pathogenesis of chronic myelogenous leukemia (CML) [2]. Unlike imatinib® that competitively inhibited the ATP-binding site of BCR-ABL kinase activity [3], GNF-2 allosterically inhibited (through binding the myristate-binding site of ABL[4]) the proliferation of BCR-ABL positive cell and induces cell apoptosis. In Ba/F3.p210 Bcr-abl-expressing cells, 48 h treatment of GNF-2 was able to inhibit the proliferation of cells with an IC_{50} value of 138 nM [5]. In addition, GNF-2 has been found to inhibit E255V and Y253H mutant Ba/F3 cells cell growth, with an

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IC50 value of 268 and 194 nM, respectively [5]. GNF-2 also caused growth inhibition of K562 and SUP-B15 with an IC50 value of 273 nM and 268 nM, respectively[5].

Injecting with BCR-ABL-expressing Ba/F3-p210 cells, 4 % lymphocytes reduction in eperipheral blood was induced [6].

References:

- [1]. REDDY, K. S. & GROVE, B. 1998. A Philadelphia-Negative Chronic Myeloid Leukemia with a BCR/ABL Fusion Gene on Chromosome 9. *Cancer Genetics and Cytogenetics*, 107, 48-50.
- [2]. RUMPOLD, H. & WEBERSINKE, G. 2011. Molecular pathogenesis of Philadelphia-positive chronic myeloid leukemia - is it all BCR-ABL? *Curr Cancer Drug Targets*, 11, 3-19.
- [3]. SEGGEWISS, R., LORE, K., GREINER, E., MAGNUSSON, M. K., PRICE, D. A., DOUEK, D. C., DUNBAR, C. E. & WIESTNER, A. 2005. Imatinib inhibits T-cell receptor-mediated T-cell proliferation and activation in a dose-dependent manner. *Blood*, 105, 2473-2479.
- [4]. FABBRO, D., MANLEY, P. W., JAHNKE, W., LIEBETANZ, J., SZYTTEHOLM, A., FENDRICH, G., STRAUSS, A., ZHANG, J., GRAY, N. S., ADRIAN, F., WARMUTH, M., PELLE, X., GROTZFELD, R., BERST, F., MARZINZIK, A., COWAN-JACOB, S. W., FURET, P. & MESTAN, J. 2010. Inhibitors of the Abl kinase directed at either the ATP- or myristate-binding site. *Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics*, 1804, 454-462.
- [5]. ADRIAN, F. J., DING, Q., SIM, T., VELENTZA, A., SLOAN, C., LIU, Y., ZHANG, G., HUR, W., DING, S., MANLEY, P., MESTAN, J., FABBRO, D. & GRAY, N. S. 2006. Allosteric inhibitors of Bcr-abl-dependent cell proliferation. *Nat Chem Biol*, 2, 95-102.
- [6]. ADRIAN, F. J., DING, Q., SIM, T., VELENTZA, A., SLOAN, C., LIU, Y., ZHANG, G., HUR, W., DING, S., MANLEY, P., MESTAN, J., FABBRO, D. & GRAY, N. S. 2006. Allosteric inhibitors of Bcr-abl-dependent cell proliferation. *Nat Chem Biol*, 2, 95-102.

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