# Data Sheet

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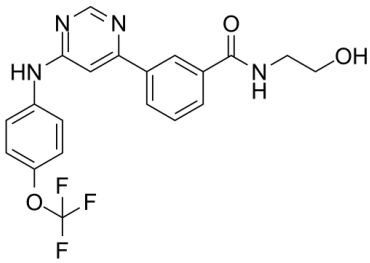
| **Product Name:** | GNF-5 |
| **Cat. No.:** | CS-1811 |
| **CAS No.:** | 778277-15-9 |
| **Molecular Formula:** | C20H17F3N4O3 |
| **Molecular Weight:** | 418.37 |
| **Target:** | Bcr-Abl |
| **Pathway:** | Protein Tyrosine Kinase/RTK |
| **Solubility:** | DMSO : ≥ 49 mg/mL (117.12 mM) |




## BIOLOGICAL ACTIVITY:

GNF-5, an analogue of GNF-2 with improved pharmacokinetic properties, is a selective non-ATP competitive inhibitor of Bcr-Abl with an IC50 value of 0.22±0.1 uM (Wild type Abl). IC50 Value: 0.22±0.1 uM (Wild type Abl) [1] Target: Abl GNF-5 is a cell-permeable GNF-2 N-hydroxyethyl carboxamide analog that exhibits in vivo efficacy in suppressing the proliferation of Bcr-abl-expressing Ba/F3 (93% and 83% of no-treatment control, respectively, on days 5 and 7 post treatment; 100 mg/kg b.i.d.) and bone marrow cells (~75% of no-treatment control in both WBC counts and spleen weight on day 7 post treatment; 50 mg/kg b.i.d.) in murine xenograft models of leukemia. Similar to GNF-2, GNF-5 exerts its effect via an allosteric mechanism (IC50 = 0.22 M against wild-type Abl) by targeting the myristate-binding pocket near the c-terminus of Abl kinase domain and thereby altering the conformational dynamics of the ATP-binding pocket. GNF-5 is ineffective toward the myristate-binding site mutant E505K and the ATP-binding site 'gatekeeper' mutant T315I.

## PROTOCOL (Extracted from published papers and Only for reference)

Animal administration [1] In vivo efficacy in Ba/F3.p210 xenograft model. Female SCID beige mice, 6-8 weeks of age (n=5 for each GNF-5-treated or vehicle control group) were injected via tail vein with 1×106 Ba/F3 cells co-expressing Bcr-Abl p210 and luciferase. Three days post-injection, mice were orally dosed twice daily with 50 or 100 mg/kg GNF-5 for seven days. At days 5 and 7, bioluminescence was quantified using luciferin and an IVIS imaging system.

## References:

[1]. Zhang J, et al. Targeting Bcr-Abl by combining allosteric with ATP-binding-site inhibitors. Nature. 2010 Jan 28;463(7280):501-6.

[2]. Meirson T, et al. Targeting invadopodia-mediated breast cancer metastasis by using ABL kinase inhibitors. Oncotarget. 2018 Apr 24;9(31):22158-22183.

## CAIndexNames:

Benzamide, N-(2-hydroxyethyl)-3-[6-[[4-(trifluoromethoxy)phenyl]amino]-4-pyrimidinyl]-

## SMILES:

FC(F)(F)OC(C=C1)=CC=C1NC2=NC=NC(C3=CC=CC(C(NCCO)=O)=C3)=C2

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

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