Product Specification Sheet

**Product Name:** GNF-2  
**Catalog Number:** C4632

### Technical Information:
- **Chemical Formula:** $C_{18}H_{13}F_{3}N_{4}O_{2}$
- **CAS #:** 778270-11-4
- **Molecular Weight:** 374.32
- **Purity:** > 98%
- **Appearance:** White solid
- **Solubility:** Soluble in DMSO up to 100 mM
- **Chemical Name:** Benzamide, 3-[6-[[4-(trifluoromethoxy)phenyl]amino]-4-pyrimidinyl]-
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.
- **Shelf Life:** In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

### Handling:
- To make 10 mM stock solution, add 0.267mL of DMSO for each mg of GNF-2.
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

### Biological Activity:
GNF-2 is an aminopyrimidine-based, allosteric inhibitor of Bcr-Abl with an in vitro IC50 activity of 70 nM. [1] GNF-2 exhibits preferential activity Bcr-Abl-expressing cells (138 nM) with little to no antiproliferative effects in a panel of Ba/F3 cells transformed with kinases such as Flt3 ITD, Tel PDGFRb, TPR Met, and Tel JAK1. In Bcr-Abl-transformed cells, GNF-2 induces apoptosis at concentrations as low as 1 uM at 48h, while parental Ba/F3 cells were unaffected at concentrations up to 10 uM. [2] GNF-2 also inhibits Bcr-Abl and Stat5 tyrosine phosphorylation at concentrations of 270 nM and 1 uM, respectively. Selectivity panel studies show that GNF-2 is inactive towards a range of serine/threonine (e.g. CDK1, cRAF, PDK1, PKA, PKB), receptor tyrosine (e.g. FGFR1/3, Flt1/3/4, HER1/2, KDR, c-Kit), and non-receptor tyrosine kinases (BTK, Lck, c-Src).

GNF-2 targets wild-type Bcr-Abl as well as many clinically-relevant imatinib (Gleevec)-resistant mutants either alone or in combination with other Bcr-Abl inhibitors. GNF-2 is also known to inhibit Arg (Abl-related gene) kinase at a IC50 of 670 nM. [1]

### Reference:

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**Chemicals are sold for research use only, not for clinical or diagnostic use.**