



Product Specification Sheet

Product Name: HKI-272 (Neratinib)

Catalog Number: C4272

Technical information:

Chemical Formula: $C_{30}H_{29}ClN_6O_3$

CAS #: 698387-09-6

Molecular Weight: 557.04

Purity: > 98%

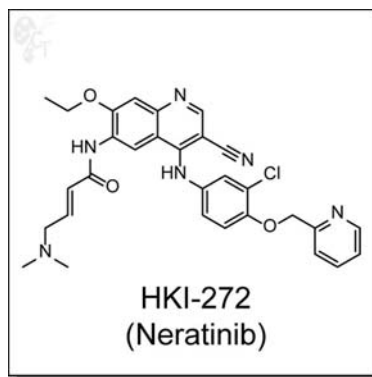
Appearance: White solid

Solubility: Soluble in DMSO up to 5 mM

Chemical Name: (E)-N-(4-(3-chloro-4-(pyridin-2-ylmethoxy)phenylamino)-3-cyano-7-ethoxyquinolin-6-yl)-4-(dimethylamino)but-2-enamide

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 0.18mL of DMSO for each mg of HKI-272 (Neratinib)
 - For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity: Neratinib (HKI-272) is an orally-available, quinazoline-based, irreversible inhibitor of HER-2 and EGFR kinases, with IC50 values of 59 and 92 nM, respectively. [1] Neratinib treatment in cells results in expected downstream inactivation of signal transduction events, leading to cell cycle arrest at the G1-S-phase transition. [2] Neratinib is selective over a broad range of serine-threonine and receptor tyrosine kinases. In cell proliferation assays, Neratinib inhibits mouse fibroblast cell lines (3T3) transfected with HER-2 at and IC50 of 3 nM. Additionally, inhibition of other HER-2- or EGFR-overexpressing cell lines such as SK-Br-3, BT474, and A431 was shown to be at IC50s of 2, 2, and 81 nM, respectively. [2]

Neratinib effectively inhibits phosphorylation of BT474, MPAK, and Akt at concentrations of 5, 2, and 2 nM, respectively. Phase I trials have shown that Neratinib can achieve stable disease control for over 6 months in NSCLC that has progressed after treatment with gefitinib or erlotinib. [3]

- Reference:**
1. Wissner et al., The development of HKI-272 and related compounds for the treatment of cancer. Arch. Pharm. Chem. 2008, 341(8), 465-477. Pubmed ID: 18493974
 2. Rabindran et al., Antitumor activity of HKI-272, an orally active, irreversible inhibitor of the HER-2 tyrosine kinase. Cancer Res. 2004, 64, 3958-3966. Pubmed ID: 15173008
 3. Wong, K-K., HKI-272 in Non-Small Cell Lung Cancer. Clin. Cancer Res. 2007, 13, 4593-4596. Pubmed ID: 17671147

To reorder: <http://www.cellagentech.com/HKI-272-Neratinib/>

For Technical Support: technical@cellagentech.com

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