# Product Data Sheet

Product Name: 4-methyl Erlotinib
Cat. No.: GC12818

## Chemical Properties

| | | | |
|---|---|---|---|
| Cas. No. | 1346601-52-2 | | |
| Chemical Name | N-(3-ethynyl-4-methylphenyl)-6,7-*bis*(2-methoxyethoxy)-4-quinazolinamine | | |
| SMILES | COCCOC(C(OCCOC)=C1)=CC2=C1C(NC3=CC(C#C)=C(C)C=C3)=NC=N2 | | |
| Formula | $C_{23}H_{25}N_3O_4$ | M.Wt | 407.5 |
| Solubility | ≤0.25mg/ml in ethanol;25mg/ml in DMSO;50mg/ml in dimethyl formamide | Storage | Store at -20°C |
| General tips | For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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 | 4-methyl Erlotinib | | |

## Background

4-methyl Erlotinib is an analog of erlotinib by the addition of a methyl group at the four position of the phenyl group. Erlotinib is a tyrosine kinase inhibitor which acts on the epidermal growth factor receptor (EGFR) [1].

The epidermal growth factor receptor (EGFR) autocrine pathway has been important for cancer development and progression, including cell proliferation, apoptosis, angiogenesis, and metastatic spread [2].

Erlotinib inhibits EGFR-associated kinase activity by binding to the EGF-activated receptor, with the phenyl group at one end sequestered in a hydrophobic pocket of the kinase domain and the ether linkages at the opposite end projecting into solvent [1].

Erlotinib can prolong survival in patients with non–small-cell lung cancer after first-line or second-line chemotherapy [3].


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References:
[1] Stamos, J. ,Sliwkowski, M.X. and Eigenbrot, C. Structure of the epidermal growth factor receptor kinase domain alone and in complex with a 4-anilinoquinazoline inhibitor. The Journal of Biological Chemisty 277(48), 46265-46272 (2002).
[2] Ciardiello F, Tortora G.  A novel approach in the treatment of cancer: targeting the epidermal growth factor receptor[J]. Clinical Cancer Research, 2001, 7(10): 2958-2970.
[3] Shepherd F A, Rodrigues Pereira J, Ciuleanu T, et al.  Erlotinib in previously treated non–small-cell lung cancer[J]. New England Journal of Medicine, 2005, 353(2): 123-132.


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