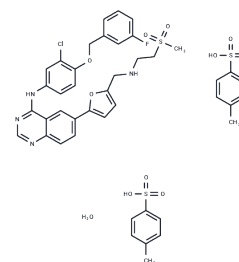


## Lapatinib ditosylate monohydrate

### Chemical Properties

CAS No. : 388082-78-8  
 Formula: C<sub>29</sub>H<sub>26</sub>ClFN<sub>4</sub>O<sub>4</sub>S·2(C<sub>7</sub>H<sub>8</sub>O<sub>3</sub>S)·H<sub>2</sub>O  
 Molecular Weight: 943.47  
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
 Actual storage temperature shall be subject to the COA.



### Biological Description

Description	Lapatinib ditosylate (Lapatinib tosylate) monohydrate is a tyrosine kinase receptor inhibitor used in the therapy of advanced breast cancer and other solid tumors. Lapatinib ditosylate monohydrate therapy is associated with transient elevations in serum aminotransferase levels and rare instances of clinically apparent acute liver injury.
Targets(IC50)	EGFR,Ferroptosis,Autophagy
Kinase Assay	In vitro kinase assays: The IC <sub>50</sub> values for inhibition of enzyme activity are generated by measuring inhibition of phosphorylation of a peptide substrate. The intracellular kinase domains of EGFR and ErbB2 are purified from a baculovirus expression system. EGFR and ErbB2 reactions are performed in 96-well polystyrene round-bottomed plates in a final volume of 45 µL. Reaction mixtures contain 50 mM 4-morpholinepropanesulfonic acid (pH 7.5), 2 mM MnCl <sub>2</sub> , 10 µM ATP, 1 µCi of [ <sup>33</sup> P] ATP/reaction, 50 µM Peptide A [Biotin-(amino hexanoic acid)-EEEEYFELVAKKK-CONH <sub>2</sub> ], 1 mM dithiothreitol, and 1 µL of DMSO containing serial dilutions of Lapatinib beginning at 10 µM. The reaction is initiated by adding the indicated purified type-1 receptor intracellular domain. The amount of enzyme added is 1 pmol/reaction (20 nM). Reactions are terminated after 10 minutes at 23°C by adding 45 µL of 0.5% phosphoric acid in water. The terminated reaction mix (75 µL) is transferred to phosphocellulose filter plates. The plates are filtered and washed three times with 200 µL of 0.5% phosphoric acid. Scintillation cocktail (50 µL) is added to each well, and the assay is quantified by counting in a Packard Topcount. IC <sub>50</sub> values are generated from 10-point dose-response curves.

### Solubility Information

Solubility	DMSO: 91 mg/mL (96.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.0599 mL	5.2996 mL	10.5992 mL
5 mM	0.212 mL	1.0599 mL	2.1198 mL
10 mM	0.106 mL	0.530 mL	1.0599 mL
50 mM	0.0212 mL	0.106 mL	0.212 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

#### Reference

Rusnak DW, et al. Mol Y Ther, 2001, 1(2), 85-94.

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