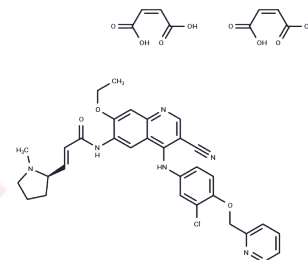


## Pyrotinib dimaleate

## Chemical Properties

CAS No. : 1397922-61-0  
 Formula: C<sub>40</sub>H<sub>39</sub>ClN<sub>6</sub>O<sub>11</sub>  
 Molecular Weight: 815.22  
 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	Pyrotinib dimaleate is a selective EGFR/HER2 dual inhibitor with IC <sub>50</sub> values of 13 and 38 nM, respectively, for the treatment of HER2-positive breast cancer.
Targets(IC <sub>50</sub> )	EGFR,HER
In vitro	<b>METHODS:</b> SK-BR-3 cells were treated with Pyrotinib dimaleate (10nM) + chrysin (20μM) or drug + mimics and drug + si-ZBTB16, and the cells were collected for apoptosis analysis. <b>RESULTS</b> Pyrotinib dimaleate + chrysin treatment led to a significant upregulation of ZBTB16 expression, and this effect was neutralized by knockdown of ZBTB16 by siRNA-ZBTB16; miR-16-5p overexpression or ZBTB16 knockdown correspondingly reduced the apoptosis rate induced by Pyrotinib dimaleate + chrysin treatment. [2]
In vivo	<b>METHODS:</b> Nude mice with tumor xenografts of BT-474 or SK-BR-3 cells were treated with Pyrotinib dimaleate (10 mg/kg, gavage, 21 days), chrysin (50 mg/kg), or their combination, and the effect of miR-16-5p expression level on anti-tumor efficacy was analyzed. <b>RESULTS</b> Combination therapy of pyrotinib dimaleate and chrysin synergistically enhanced autophagy in HER2-positive breast cancer cells by regulating the miR-16-5p/ZBTB16/G6PD axis.[2]

## Solubility Information

Solubility	H <sub>2</sub> O: 50 mg/mL (61.33 mM),Sonication is recommended. Ethanol: 40 mg/mL (49.07 mM),Sonication is recommended. DMSO: 240 mg/mL (294.4 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	1.2267 mL	6.1333 mL	12.2666 mL
5 mM	0.2453 mL	1.2267 mL	2.4533 mL
10 mM	0.1227 mL	0.6133 mL	1.2267 mL
50 mM	0.0245 mL	0.1227 mL	0.2453 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

Li X, et al. Discovery and development of pyrotinib: A novel irreversible EGFR/HER2 dual tyrosine kinase inhibitor with favorable safety profiles for the treatment of breast cancer. *Eur J Pharm Sci.* 2017 Dec 15;110:51-61.

Liu X, et al. Pyrotinib and chrysin synergistically potentiate autophagy in HER2-positive breast cancer. *Signal Transduct Target Ther.* 2023 Dec 18;8(1):463.

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