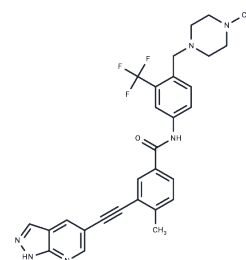


## Olverembatinib

## Chemical Properties

CAS No. :	1257628-77-5
Formula:	C <sub>29</sub> H <sub>27</sub> F <sub>3</sub> N <sub>6</sub> O
Molecular Weight:	532.56
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Olverembatinib (GZD 824) is an orally bioavailable Bcr-Abl inhibitor for Bcr-Abl(WT, IC <sub>50</sub> : 0.34 nM) and Bcr-Abl(T315I, IC <sub>50</sub> : 0.68 nM).
Targets(IC <sub>50</sub> )	Bcr-Abl
In vitro	GZD824 potently inhibits the growth of Ba/F3 cells expressing wildtype Bcr-Abl with IC <sub>50</sub> of 1.0 nM. Highly consistent with biochemical kinase inhibition and tight protein binding affinity, GZD824 also strongly inhibits the proliferation of Ba/F3 cells expressing Bcr-AblT315I mutant and 14 other resistance-relevant Bcr-Abl mutants. In addition, GZD824 efficiently suppresses the activation of Bcr-Abl as well as downstream Crkl and STAT5 in a concentration-dependent manner in K562 CML cells. [1]
Kinase Assay	FRET-Based Z'-Lyte Assay Detecting Peptide Substrate Phosphorylation: The kinases ABL1, ABL1(E255K), ABL1 (G250E), ABL1(T315I), and ABL1(Y253F) are P3049, PV3864, PV3865, PV3866, and PV3863 are full-length human recombinant protein expressed in insect cells and histidine-tagged. Inhibition activities of inhibitors against Abl1 and its mutants are performed in 384-well plates using the FRET-based Z'-Lyte assay system. Briefly, the kinase substrate is diluted into 5 μL of kinase reaction buffer; and the kinase is added. Compounds (10 nL) with indicated concentrations are then delivered to the reaction by using Echo liquid handler, and the mixture is incubated for 30 min at room temperature. Then 5 μL of 2X ATP solution is added to initiate the reaction, and the mixture is further incubated for 2 h at room temperature. The resulting reactions contains 10 μM (for wild-type Abl1, and mutants Y253F, Q252H, M351T, and H396P) or 5 μM (for mutants E255K, G250E, T315I) of ATP, 2 μM of Tyr2 Peptide substrate in 50 mM HEPES (PH 7.5), 0.01% BRIJ-35, 10 mM MgCl <sub>2</sub> , 1 mM EGTA, 0.0247 μg/mL Abl1, and inhibitors as appropriate. Then, 5 μL of development reagent is added, and the mixture is incubated for 2 h at room temperature before 5 μL of stop solution is added. Fluorescence signal ratio of 445 nm (Coumarin)/520 nm (fluorescein) is examined on an EnVision Multilabel Reader. The data are analyzed using Graphpad Prism5. The data are the mean value of three experiments.
Cell Research	Cells in the logarithmic phase are plated in 96-well culture dishes. Twenty-four hours later, cells are treated with the corresponding compounds or vehicle control at the indicated concentration for 72 h. CCK-8 is added into the 96-well plates (10 μL/well) and incubated with the cells for 3 h. OD450 and OD650 are determined by a microplate

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Cell Research	reader. Absorbance rate (A) for each well is calculated as OD450 - OD650. The cell viability rate for each well is calculated as $V\% = (A_s - A_c)/(A_b - A_c) \times 100\%$ , and the data were further analyzed using Graphpad Prism5. The data are the mean value of the three experiments. $A_s$ is the absorbance rate of the test compound well, $A_c$ is the absorbance rate of the well without either cell or test compound, and $A_b$ is the absorbance rate of the well with cell and vehicle control.(Only for Reference)
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### Solubility Information

Solubility	DMSO: 245 mg/mL (460.04 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (7.51 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8777 mL	9.3886 mL	18.7772 mL
5 mM	0.3755 mL	1.8777 mL	3.7554 mL
10 mM	0.1878 mL	0.9389 mL	1.8777 mL
50 mM	0.0376 mL	0.1878 mL	0.3755 mL

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

Ren X, et al. J Med Chem. 2013, 56(3), 879-894.

Cheng S, Jin P, Li H, et al. Evaluation of CML TKI Induced Cardiovascular Toxicity and Development of Potential Rescue Strategies in a Zebrafish Model. Frontiers in Pharmacology. 2021: 2866.

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