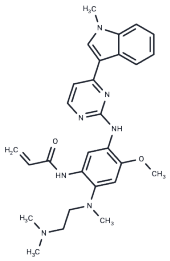
Data Sheet (Cat.No.T2490)

TargetMol

Osimertinib

Chemical Properties



CAS No. : 1421373-65-0

Formula: C28H33N7O2

Molecular Weight: 499.61

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Osimertinib (AZD-9291) is an EGFR third-generation inhibitor that inhibits the T790M resistance mutation produced by second-generation EGFR inhibitors with irreversible and oral activity. Osimertinib has antitumor activity for the treatment of EGFR-mutated non-small-cell lung cancer.
Targets(IC50)	EGFR
In vitro	In the EGFRm+ (PC9) and EGFRm+/T790M (H1975) tumor models, oral administration of AZD9291 (5 mg/kg) effectively inhibits AKT and ERK signaling pathways as well as EGFR phosphorylation in tumors, leading to tumor regression.
In vivo	In mutant EGFR cell lines, AZD9291 effectively inhibits cell proliferation.
Kinase Assay	ACY-1215 is dissolved and subsequently diluted in assay buffer [50 mM HEPES, pH 7.4, 100 mM KCl, 0.001% Tween-20, 0.05% BSA, and 20 μM tris(2-carboxyethyl)phosphine] to 6-fold the final concentration. HDAC enzymes are diluted to 1.5-fold of the final concentration in assay buffer and pre-incubated with ACY-1215 for 10 minutes before the addition of the substrate. The amount of FTS (HDAC1, HDAC2, HDAC3, and HDAC6) or MAZ-1675 (HDAC4, HDAC5, HDAC7, HDAC8, and HDAC9) used for each enzyme is equal to the Michaelis constant (Km), as determined by a titration curve. FTS or MAZ-1675 is diluted in assay buffer to 6-fold the final concentration with 0.3 μM sequencing grade trypsin. The substrate/trypsin mix is added to the enzyme/compound mix and the plate is shaken for 60 seconds and then placed into a SpectraMax M5 microtiter plate reader. The enzymatic reaction is monitored for release of 7-amino-4-methoxy-coumarin over 30 minutes, after deacetylation of the lysine side chain in the peptide substrate, and the linear rate of the reaction is calculated[1].
Cell Research	AZD-9291 is dissolved in DMSO and stored, and then diluted with appropriate medium before use[1]. PC-9 cells are seeded into T75 flasks (5×105 cells/flask) in RPMI growth media and incubated at 37°C, 5% CO2. The following day the media is replaced with media supplemented with a concentration of EGFR inhibitor equal to the EC50 concentration predetermined in PC-9 cells. Media changes are carried out every 2-3 days and resistant clones allowed to grow to 80% confluency prior to the cells being trypsinised and reseeded at the original seeding density in media containing twice the concentration of EGFR inhibitor. Dose escalations are continued until a final concentration of 1.5 μM Gefitinib, 1.5 μM Afatinib, 1.5 μM WZ4002 or 160 nM AZD-9291

	are achieved[1].

Solubility Information

Solubility	Ethanol: 22 mg/mL (44.03 mM),Sonication is recommended. DMSO: 55 mg/mL (110.09 mM),Sonication is recommended. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 9.2 mg/mL (18.41 mM),Suspension. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0016 mL	10.0078 mL	20.0156 mL
5 mM	0.4003 mL	2.0016 mL	4.0031 mL
10 mM	0.2002 mL	1.0008 mL	2.0016 mL
50 mM	0.040 mL	0.2002 mL	0.4003 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.

Reference

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