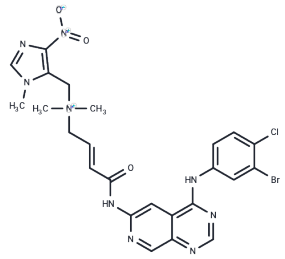
Data Sheet (Cat.No.T13088)

TargetMol

Tarloxotinib bromide

Chemical Properties



CAS No. : 1636180-98-7

Formula: C24H24Br2ClN9O3

Molecular Weight: 681.77

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	Tarloxotinib bromide (TH-4000) is an irreversible inhibitor of EGFR/HER2.
Targets(IC50)	EGFR,HER
In vitro	Tarloxotinib bromide is metabolized efficiently under hypoxia using a panel of human NSCLC cell lines (rate of TKI release 0.4-2.1 nM/hr/106 cells), a process that is inhibited by oxygen (TKI release 0.002 nM/hr/106 cells). Cellular anti-proliferative and receptor phosphorylation assays demonstrate a 14-80 fold reduction of Tarloxotinib bromide activity relative to TKI. Using PC9 tumors, hyperbaric oxygen breathing suppresse release of TKI from Tarloxotinib bromide by >80% (538 vs 99 nM/kg; p<0.01) compared to air breathing controls[1].
In vivo	Tarloxotinib bromide treatment regresses the WT EGFR NSCLC tumor models H125 and H1648, demonstrating Tarloxotinib bromide provides the necessary therapeutic index to inhibit WT EGFR in vivo[2].

Solubility Information

Solubility	DMSO: 33 mg/mL (48.4 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: 2 mg/mL (2.93 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4668 mL	7.3339 mL	14.6677 mL
5 mM	0.2934 mL	1.4668 mL	2.9335 mL
10 mM	0.1467 mL	0.7334 mL	1.4668 mL
50 mM	0.0293 mL	0.1467 mL	0.2934 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

Adam V Patterson, et al. Abstract 5358: The hypoxia-activated EGFR-TKI TH-4000 overcomes erlotinib-resistance in preclinical NSCLC models at plasma levels achieved in a Phase 1 clinical trial. AACR 106th Annual Meeting 2015; April 18-22, 2015; Philadelphia, PA.

Shevan Silva, et al. Abstract A67: Preclinical efficacy of tarloxotinib bromide (TH-4000), a hypoxia-activated EGFR/HER2 inhibitor: rationale for clinical evaluation in EGFR mutant, T790M-negative NSCLC following progression on EGFR-TKI therapy. Abstracts: AACR-NCI-EORTC International Conference: Molecular Targets and Cancer Therapeutics; November 5-9, 2015; Boston, MA.