

ZD-4190

Chemical Properties

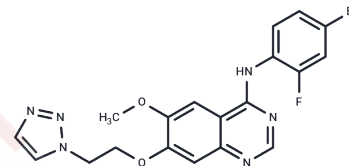
CAS No. : 413599-62-9

Formula: C₁₉H₁₆BrFN₆O₂

Molecular Weight: 459.27

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	ZD-4190 is a compound that inhibits both the vascular endothelial growth factor receptor 2 (VEGFR2) and the epidermal growth factor receptor (EGFR) signaling pathways, utilized in cancer treatment.
Targets(IC50)	EGFR, VEGFR
In vitro	ZD4190 can prevent outgrowth of malignant cells when the tumour burden is below a critical threshold.
In vivo	ZD4190 (100 mg/kg, p.o.) effectively delays MDA-MB-435 tumor growth in mice. In ZD4190-treated tumors, [18F-FPPRGD2] uptake significantly decreased by 26.74 ± 8.12% (p<0.05) on day 1 and by 41.19 ± 6.63% (p<0.01) on day 3, returning to baseline by day 7. Tumor uptake of [18F-FLT] also decreased on days 1 and 3 after initiating ZD4190 treatment. However, ZD4190 did not significantly alter [18F-FDG] uptake compared to the control group.
Animal Research	ZD4190 was administered by gavage suspended in 1% polysorbate 80 at 50 mg/kg 24 h after tumour cell implantation for a maximum of 22 days. Control rodents were gavaged with the vehicle only and a third group was untreated. In preliminary experiments, rodents were killed on alternate days so that the effect of ZD4190 on tumour outgrowth could be assessed and subsequently the treatment response was evaluated at day 9 or 22. At least five rodents were included in each treatment group.

Solubility Information

Solubility	DMSO: 20.83 mg/mL (45.35 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (4.35 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	2.1774 mL	10.8868 mL	21.7737 mL
5 mM	0.4355 mL	2.1774 mL	4.3547 mL
10 mM	0.2177 mL	1.0887 mL	2.1774 mL
50 mM	0.0435 mL	0.2177 mL	0.4355 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

Yang M, et al. PET imaging of early response to the tyrosine kinase inhibitor ZD4190. *Eur J Nucl Med Mol Imaging*. 2011 Jul;38(7):1237-47. doi: 10.1007/s00259-011-1742-z. Epub 2011 Mar 1.

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