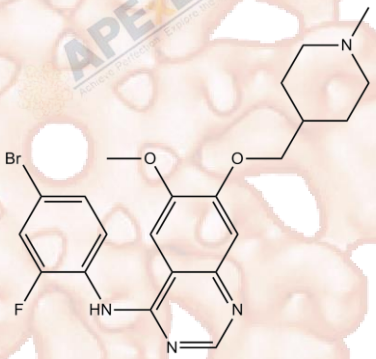
Product Data Sheet

Vandetanib (ZD6474)

Cat. No.:	A8555
CAS No.:	443913-73-3
Formula:	C22H24BrFN4O2
M.Wt:	475.35
Synonyms:	ZD6474
Target:	Tyrosine Kinase
Pathway:	VEGFR
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; ⩾11.88 mg/mL in DMSO with gentle warming; ⩾8.74 mg/mL in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.1037 mL	10.5186 mL	21.0371 mL
5 mM	0.4207 mL	2.1037 mL	4.2074 mL
10 mM	0.2104 mL	1.0519 mL	2.1037 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	VEGFR2/EGFR antagonist
IC_{50} & Target	40 nM (VEGFR2)

In Vitro

Cell Viability Assay

Cell Line:	TT and MZ-CRC-1 cells
Preparation method：	The solubility of this compound in DMSO is <10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.
Reacting conditions:	250 nM, 5 days for TT cells6 days for MZ-CRC-1 cells

	Applications:	After 5 days of treatment, TT (harboring RET/C634W) cells treated with vehicle numbered 1300×103 and those treated with 250 nM ZD6474 numbered 800×103. MZ-CRC-1 (harboring RET/M918T) cells treated (for 6 days) with vehicle or 250 nM ZD6474 numbered 1144×103 and 712×103 respectively. In TT cells, ZD6474 exerted modest cytotoxicity at doses in the range of its IC50 for the RET kinase. A trypan blue exclusion viability assay confirmed that the compound exerted, instead, cytotoxicity at 1 week of treatment at doses of 1–5 μM.
In Vivo	**Animal experiment**	
	Animal models:	Female BALB/c-nu/nu athymic mice injected with TKKK-Luc and OZ-Luc cells
	Dosage form:	Oral administration; 50, 25, or 12.5mg/kg; daily
	Applications:	Mice were randomly divided into four treatment groups, namely vandetanib 50, 25, or 12.5mg/kg per b.w. per day, or vehicle control. Treatment started from the next day and continued for at least 4 weeks. The growth of the TKKK-Luc xenograft was significantly suppressed by vandetanib treatment at a lower dose, 12.5–25 mg/kg, whereas reduction of the OZ-Luc xenograft tumor was observed at a vandetanib dose of 50 mg/kg. At the end of the study, tumor volume was significantly lower in the vandetanib 50 mg/kg group of the OZ-Luc xenograft and in the 12.5–50 mg/kg group of the TKKK-Luc xenograft than in the vehicle-treated control group.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1] Vitagliano D, De Falco V, Tamburrino A, et al. The tyrosine kinase inhibitor ZD6474 blocks proliferation of RET mutant medullary thyroid carcinoma cells. Endocrine-related cancer, 2011, 18(1): 1-11.

[2] Yoshikawa D, Ojima H, Kokubu A, et al. Vandetanib (ZD6474), an inhibitor of VEGFR and EGFR signalling, as a novel molecular-targeted therapy against cholangiocarcinoma. British journal of cancer, 2009, 100(8): 1257-1266.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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