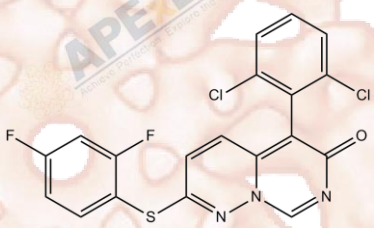
Product Data Sheet

VX-745

Cat. No.:	A8686
CAS No.:	209410-46-8
Formula:	C19H9Cl2F2N3OS
M.Wt:	436.27
Synonyms:	
Target:	MAPK Signaling
Pathway:	p38
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

⩾21.8 mg/mL in DMSO; insoluble in H2O; ⩾2.1 mg/mL in EtOH with gentle warming and ultrasonic

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	2.2922 mL	11.4608 mL	22.9216 mL
5 mM	0.4584 mL	2.2922 mL	4.5843 mL
10 mM	0.2292 mL	1.1461 mL	2.2922 mL

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

Biological Activity

Shortsummary	P38α inhibitor,highly potent and selective
IC_{50} & Target	10 nM (p38α), 220 nM (p38β)

In Vitro

Cell Viability Assay

Cell Line:	Human bone marrow stromal cells (BMSCs) and multiple myeloma (MM) cells
Preparation method:	The solubility of this compound in DMSO is > 21.8 mg/mL. 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:	60 nM ~ 20 μM; 48 hrs

	Applications:	In BMSCs, VX-745 inhibited IL-6 and VEGF secretion, without affecting their viability. VX-745 also reduced TNF-α-induced IL-6 secretion in BMSCs. In addition, VX-745 inhibited both MM cell proliferation and IL-6 secretion in BMSCs induced by adherence of MM cells to BMSCs, which implied that VX-745 could inhibit paracrine MM cell growth in the bone marrow milieu, as well as overcome cell adhesion-related drug resistance.
In Vivo	**Animal experiment**	
	Animal models:	A type II collagen-induced arthritis (CIA) mice model
	Dosage form:	2.5, 5 and 10 mg/kg; p.o.; b.i.d., for 20 days
	Applications:	In a CIA mice model, VX-745 at the doses of 2.5, 5, and 10 mg/kg improved the inflammatory scores by 27%, 31% and 44%, respectively. In addition, compared with the vehicle control group, VX-745 also improved the histological scores by 32 ~ 39%, which indicated its protection on bone and cartilage erosion.
	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]. Duffy, J.P., et al., The Discovery of VX-745: A Novel and Selective p38alpha Kinase Inhibitor. ACS Med Chem Lett, 2011. 2(10): p. 758-63.

[2]. Hideshima T, Akiyama M, Hayashi T, Richardson P, Schlossman R, Chauhan D, Anderson KC. Targeting p38 MAPK inhibits multiple myeloma cell growth in the bone marrow milieu. Blood. 2003 Jan 15;101(2):703-5.

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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