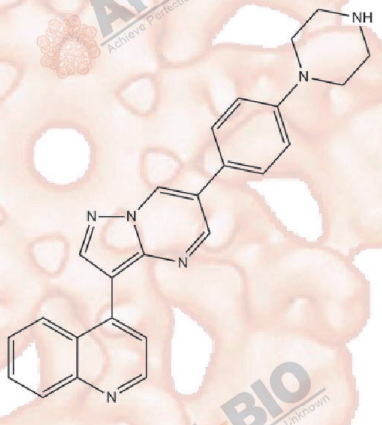
Product Data Sheet

LDN-193189

Cat. No.:	A8324
CAS No.:	1062368-24-4
Formula:	C25H22N6
M.Wt:	406.48
Synonyms:	LDN 193189;LDN193189
Target:	TGF-β / Smad Signaling
Pathway:	SMAD
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

insoluble in DMSO; insoluble in EtOH; insoluble in H2O

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.4601 mL	12.3007 mL	24.6015 mL
5 mM	0.4920 mL	2.4601 mL	4.9203 mL
10 mM	0.2460 mL	1.2301 mL	2.4601 mL

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

Biological Activity

Shortsummary	ALK inhibitor,potent and selective
IC_{50} & Target	5 nM (ALK2), 30 nM (ALK3)

In Vitro

Cell Viability Assay

Cell Line:	C2C12 myofibroblast cells; bronchial epithelial (Beas2B) cells
Preparation method:	This compound is limited soluble in DMSO. 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:	0.005-5 μM. 30-60 min

	Applications:	LDN-193189 inhibited both BMP induced Smad1/5/8 phosphorylation and BMP-mediated induction of the p38 MAPK, Erk1/2 and Akt pathway in C2C12 cells. LDN-193189 dose-dependently inhibited the activation of Smad1/5/8, p38 and Akt. LDN-193189 induced a strong increase in phosphorylated p38 MAPK levels and a slight increase in p-Akt in C2C12 cells. LDN (10 μM, 60 min) induced p38 and Akt phosphorylation. LDN (0.5 μM, 30 min) inhibited BMP-mediated Smad1/5/8, p38, ATF2 and CREB phosphorylation.
In Vivo	**Animal experiment**	
	Animal models:	C57BL/6 mice
	Dosage form:	Intraperitoneal injection; 3 mg/kg every 12 h
	Applications:	In Ad.Cre-injected, caALK2-expressing mice, treatment with LDN-193189 prevented radiographic lesions at P15. LDN-193189–treated mice appeared to preserve knee and ankle joints at P30 and P60. LDN-193189-treated mice showed no ectopic bone at P15 but did show enhanced cartilage formation in surrounding soft tissues. LDN-193189–treated mice showed mildly impaired range of motion even in the absence of radiographically visible disease at P30.
	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]. Yu PB, Deng DY, Lai CS, Hong CC, Cuny GD, Bouxsein ML, Hong DW, McManus PM, Katagiri T, Sachidanandan C, Kamiya N, Fukuda T, Mishina Y, Peterson RT, Bloch KD. BMP type I receptor inhibition reduces heterotopic [corrected] ossification. Nat Med. 2008 Dec;14(12):1363-9.

[2]. Yu PB, Deng DY, Lai CS, Hong CC, Cuny GD, Bouxsein ML, Hong DW, McManus PM, Katagiri T, Sachidanandan C, Kamiya N, Fukuda T, Mishina Y, Peterson RT, Bloch KD. BMP type I receptor inhibition reduces heterotopic [corrected] ossification. Nat Med. 2008 Dec;14(12):1363-9.

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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