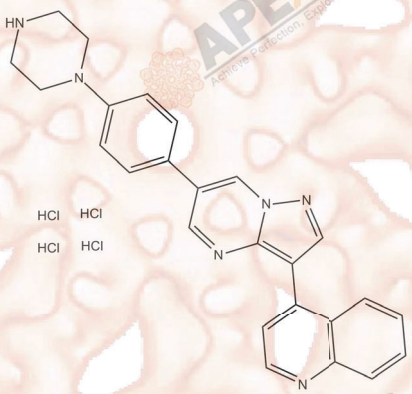
Product Data Sheet

LDN193189 Hydrochloride

Cat. No.: A3545
CAS No.: 1062368-62-0
Formula: C25H26Cl4N6
M.Wt: 552.33
Synonyms: LDN 193189 hydrochloride; LDN-193189 hydrochloride
Target: TGF-β / Smad Signaling
Pathway: SMAD
Storage: Store at -20°C



Solvent & Solubility

In Vitro

⩾16.4 mg/mL in DMSO, ⩾27.6 mg/mL in H2O,insoluble in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	1.8105 mL	9.0526 mL	18.1051 mL
5 mM	0.3621 mL	1.8105 mL	3.6210 mL
10 mM	0.1811 mL	0.9053 mL	1.8105 mL

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

Biological Activity

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

In Vitro

Cell Viability Assay

Cell Line:	C2C12 cells
Preparation method：	The solubility of this compound in DMSO is >2.1mg/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:	100 nM, 0-72h

	Applications:	LDN-193189 inhibited the induction of alkaline phosphatase activity in C2C12 cells by BMP4 even when administered 12 h after BMP stimulation.
In Vivo	**Animal experiment**	
	Animal models:	Conditional caALK2-transgenic mice, PCa-118b tumor-bearing mice
	Dosage form:	Intraperitoneal administration, 3 mg/kg
	Applications:	In conditional caALK2-transgenic mice with Ad.Cre on on postnatal day 7 (P7), LDN-193189 (3 mg/kg, i.p.) led to mild calcifications surrounding the left tibia and fibula first visible at P13, and prevented radiographic lesions at P15 without causing weight loss or growth retardation, spontaneous fractures, decreased bone density or behavioral abnormalities. In PCa-118b tumor-bearing mice, LDN-193189 treatment attenuated tumor growth and reduced bone formation in the tumors.
	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

1. Bae JS, Jeon Y, et al."Depletion of MOB1A/B causes intestinal epithelial degeneration by suppressing Wnt activity and activating BMP/TGF-β signaling." Cell Death Dis. 2018 Oct 22;9(11):1083.PMID:30349003

See more customer validations on www.apexbt.com.

References

[1]. Boergermann JH1, Kopf J, Yu PB, Knaus P. Dorsomorphin and LDN-193189 inhibit BMP-mediated Smad, p38 and Akt signalling in C2C12 cells. Int J Biochem Cell Biol. 2010 Nov;42(11):1802-7.

[2]. Paul B Y, Deng D Y, Lai C S, et al. BMP type I receptor inhibition reduces heterotopic ossification[J]. Nature medicine, 2008, 14(12): 1363-1369.

[3]. Lee Y C, Cheng C J, Bilen M A, et al. BMP4 promotes prostate tumor growth in bone through osteogenesis[J]. Cancer research, 2011, 71(15): 5194-5203.

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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