

Data Sheet

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Product Name : LDN193189 hydrochloride

Cat. No. : PC-42885
CAS No. : 1062368-62-0
Molecular Formula : C₂₅H₂₆Cl₄N₆
Molecular Weight : 552.3261

Target : Anaplastic Lymphoma Kinase (ALK)

Solubility : H2O: 20 mg/mL

Biological Activity

LDN193189 hydrochloride is a potent, selective **BMP type I receptor** that inhibits BMP4-induced phosphorylation of SMAD1/5/8 with IC50 of 5 nM, displays >200-fold selectivity for BMP signaling over TGF- β signaling (IC50>1,000 nM). LDN193189 efficiently inhibits transcriptional activity of the BMP type I receptors ALK2 and ALK3 (IC50=5 nM and 30 nM, respectively), with weaker effects on activin and the TGF- β type I receptors ALK4, ALK5 and ALK7. LDN193189 also blocks the transcriptional activity induced by either constitutively active ALK2 R206H or ALK2 Q207D mutant proteins, affects BMP-induced osteoblast differentiation, attenuates ectopic ossification in vivo.

References

Yu PB, et al. *Nat Med*. 2008 Dec;14(12):1363-9.

Cuny GD, et al. *Bioorg Med Chem Lett*. 2008 Aug 1;18(15):4388-92.

Cannon JE, et al. *Br J Pharmacol*. 2010 Sep;161(1):140-9. Steinbicker AU, et al. *Blood*. 2011 May 5;117(18):4915-23.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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