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Data Sheet

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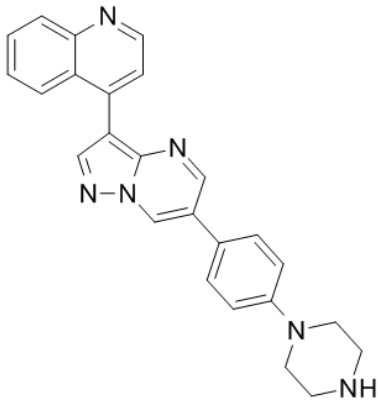
Product Name : LDN193189
Cat. No. : PC-42884
CAS No. : 1062368-24-4
Molecular Formula : $C_{25}H_{22}N_6$
Molecular Weight : 406.4824
Target : Anaplastic Lymphoma Kinase (ALK)
Solubility :



Biological Activity

LDN193189 (DM 3189) 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.
LDN193189 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.

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