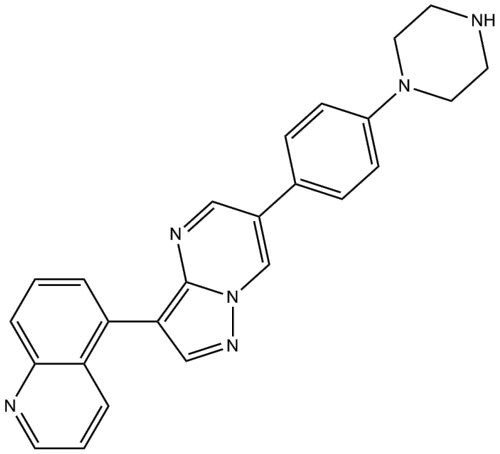
Product Data Sheet

Product Name: LDN-212854
Cat. No.: GC17035

Chemical Properties

Cas. No.	1432597-26-6		
SMILES	C1CN(CCN1)C2=CC=C(C=C2)C3=CN4C(=C(C=N4)C5=C6C=CC=NC6=CC=C5)N=C3		
Formula	$C_{25}H_{22}N_6$	M.Wt	406.48
Solubility	≥ 20.3mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

LDN-212854 is a selective inhibitor of bone morphogenetic protein (BMP) signaling with IC50 value of 1.2nM [1].

In the kinase assay, LDN-212854 shows inhibitory activities against caALK2 and caALK5 with IC50 values of 16nM and 2μM, respectively. It demonstrates that LDN-212854 is selective against BMP over TGF-β signaling. Besides that, the inhibition of caALK2 caused by LDN-212854 is 6- and 10-fold more potent than that of caALK1 and caALK3, respectively. In C2C12 cells transfected with BMP

receptors, LDN-212854 also exerts preferential inhibition against caALK2. Furthermore, in a transgenic ALK2Q207D model of heterotopic ossification, treatment of LDN-212854 prevents the formation of heterotopic bone and preserves limb range of motion [1].

References:

[1] Mohedas A H, Xing X, Armstrong K A, et al. Development of an ALK2-biased BMP type I receptor kinase inhibitor. ACS chemical biology, 2013, 8(6): 1291-1302.