

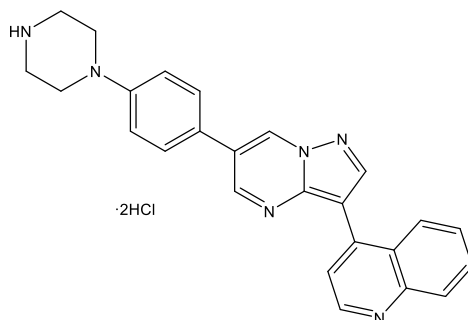
**Catalog # 10-4764**

**LDN-193189 dihydrochloride**

CAS# 1435934-00-1

4-[6-[4-(1-Piperazinyl)phenyl]pyrazolo[1,5-a]pyrimidin-3-yl]-quinoline dihydrochloride

Lot # FBA8046



LDN-193189 HCl is a potent and selective inhibitor of ALK2 (IC<sub>50</sub> = 5 nM) and ALK3 (IC<sub>50</sub> = 30 nM), thereby inhibiting SMAD1/5/8 phosphorylation.<sup>1</sup> Only weak inhibition of ALK4, ALK5, and ALK7 is observed. Promotes neuronal differentiation of human pluripotent stem cells.<sup>2-3</sup> LDN-193189 HCl has also been used to examine the role of osteogenesis in prostate tumor metastases in bone.<sup>4</sup>

- 1) Yu *et al.* (2008), *BMP type 1 receptor inhibition reduces heterotopic ossification*; Nat. Med., **14(12)** 1363
- 2) Chambers *et al.* (2012), *Combined small-molecule inhibition accelerates developmental timing and converts human pluripotent stem cells into nociceptors*; Nature Biotechnol. **30** 715
- 3) Kreitzer *et al.* (2013) *A robust method to derive functional neural crest cells from human pluripotent stem cells*; Am. J. Stem Cells, **2** 119
- 4) Lee *et al.* (2011) *BMP4 promotes prostate tumor growth in bone through osteogenesis*; Cancer Res. **71** 5194

**PHYSICAL DATA**

Molecular Weight: 479.40  
 Molecular Formula: C<sub>25</sub>H<sub>22</sub>N<sub>6</sub>·2HCl  
 Purity: 99% by HPLC  
 NMR: Conforms  
 Solubility: DMSO and water (5 mg/mL)  
 Physical Description: Orange-yellow solid  
 Storage and Stability: Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO and water may be stored at -20°C for up to 2 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**