

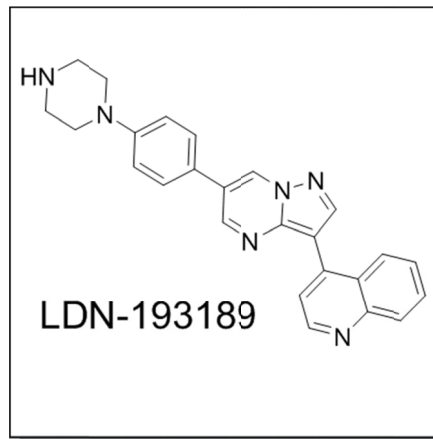


Product Specification Sheet

Product Name: LDN-193189
Catalog Number: C5361-2 (powder)
C5361-2s (10mM in DMSO)
Package Size: 2 mg

Technical information:

Chemical Formula: C₂₅H₂₂N₆
CAS #: 1062368-24-4
Molecular Weight: 406.48
Purity: >98%
Formulation: Yellow solid
Solubility: Soluble in DMSO up to 100 mM
Chemical Name: 4-(6-(4-(piperazin-1-yl)phenyl)pyrazolo[1,5-a]pyrimidin-3-yl)quinoline
Storage: Store solid powder at 4°C desiccated;
Store DMSO solution at -20°C.



- Handling:**
- For C5361-2 (powder), add 492 μ L of DMSO to make 10 mM solution.
 - For C5361-2s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

Biological Activity: LDN193189 is a highly potent BMP inhibitor, prevents Smad1, Smad5, and Smad8 phosphorylation through inhibition of BMP type I receptors ALK2 (IC₅₀=5nM) and ALK3 (IC₅₀=30 nM). Its inhibitions against ALK4, ALK5, and ALK7 are weak (IC₅₀ >500 nM). As BMP signaling coordinates developmental patterning and has essential physiological roles in mature organisms, LDN-193189 is used to reduce ectopic ossification in a mouse model.

- Reference:**
1. Paul B Yu, et al. BMP type I receptor inhibition reduces heterotopic ossification. *Nature Med.* (2008) 14: 1363-1369.
 2. Cuny GD, et al. Structure-activity relationship study of bone morphogenetic protein (BMP) signaling inhibitors. *Bioorg Med Chem Lett.* (2008) 18(15):4388-92.
 3. Paul B Yu, et al. Dorsomorphin inhibits BMP signals required for embryogenesis and iron metabolism. *Nature Chem Biol.* (2008) 4: 33-41.

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