**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:** C_{25}H_{22}N_{6}
- **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 uL 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 (IC_{50}=5nM) and ALK3 (IC_{50}=30 nM). Its inhibitions against ALK4, ALK5, and ALK7 are weak (IC_{50}>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:**

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