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1. Description

Components StemMACS™ LDN-193189 in Solution.
A selective small molecule BMP inhibitor.

Size 2 mg in 492.6 µL

Product format 10 mM in DMSO, filtered (0.2 µm)

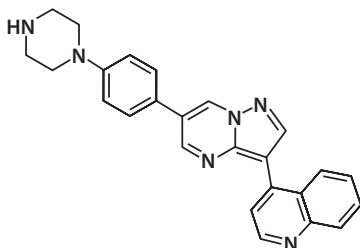
Molecular weight 406.48

CAS number 1062368-24-4

Systematic name 4-[[6-[4-piperazin-1-yl)phenyl]pyrazolo[1,5-a]pyrimidin-3-yl]quinoline

Molecular formula C₂₅H₂₂N₆

Structure



Purity >96%

Storage Store aliquots at -20 °C protected from light.
The aliquots are stable for 6 months from date of receipt when stored as directed.

2. Protocol

2.1 Preparation of aliquots

1. Before opening, briefly centrifuge the vial to ensure full recovery of sample.
2. Prepare appropriate aliquots and store at -20 °C. Avoid repeated freeze-thaw cycles.

2.2 Use in cell culture

1. Thaw aliquots at 37 °C as needed.
2. To avoid precipitation, prewarm the cell culture media prior to adding the reconstituted compound.

▲ **Note:** The DMSO concentration in culture should not exceed 0.5 %.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

1.1 Background information

StemMACS LDN-193189 in Solution is a highly potent, selective, and cell permeable inhibitor of BMP signaling. It inhibits the BMP type I receptors ALK2 (IC₅₀ = 5 nM) and ALK3 (IC₅₀ = 30 nM) and prevents phosphorylation of their downstream targets Smad1, Smad5, and Smad8. In contrast, LDN-193189 has little effect on ALK4, ALK5, and ALK7. LDN-193189 is a derivative of dorsomorphin, and has been used instead of the protein Noggin for inhibition of BMP signaling. In pluripotent stem cell research, LDN-103189 is used together with small molecules or growth factors to modulate stem cell differentiation, e.g., during neural induction or dopaminergic differentiation.

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