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### **Ready-to-use kit iN-LSC (x1000)**

**Cocktail Formulation:** 0.5 mM LDN193189, 10 mM SB431542, 2 mM CHIR99021 in DMSO.

**Effective Concentration in Cell Culture:** 0.5  $\mu$ M LDN193189, 10  $\mu$ M SB431542, 2  $\mu$ M CHIR99021.

Purity:  $\geq$  98% for each compound

Storage: 4°C for 3 month.

-20°C for 6 month.

#### **Biological Activity:**

In previous studies, dual SMAD inhibition using small molecule inhibitors of BMP and TGF $\beta$  pathways, i.e., LDN193189 and SB431542 respectively, has been shown to induce efficient neural differentiation of human pluripotent stem cells. In a recent publication, it was shown that combination of LDN193189/SB431542 with a specific GSK-3 $\beta$  inhibitor (CHIR99021) could significantly promote the conversion of postnatal human fibroblasts transduced with *Ascl1* and *Ngn2* into functional neuron-like cells with yields up to 200% and neuronal purities up to 80%.

#### **How to Use:**

**In vitro:** Dilute received Ready-to-use iN-LSC stock solution at 1:1000 into your neuronal reprogramming medium to make the neuron induction media and use it to initiate neuronal reprogramming.

#### **Reference:**

1. Ladewig J, et al. Small molecules enable highly efficient neuronal conversion of human fibroblasts. (2012) Nature Methods 9(6), p575-578.

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