



# SMALL MOLECULES FOR STEM CELL RESEARCH

## A 83-01

Potent and selective ALK4, 5 and 7 inhibitor. Prevents phosphorylation of Smad2/3 and growth inhibition induced by TGF $\beta$ 2. Inhibits differentiation of rat induced pluripotent stem cells and increases clonal expansion efficiency. Together with AMI-5, A83-01 enabled Oct4-induced reprogramming of mouse embryonic fibroblasts.

10 mg

## CHIR99021

GSK-3 inhibitor. Improves reprogramming efficiency and enhances the differentiation to cardiomyocyte and neurocyte.

5 mg

## DAPT

$\gamma$ -Secretase Inhibitor. Enhances the differentiation from PSCs to neurocyte.

10 mg

## Dexamethasone

A synthetic anti-inflammatory glucocorticoid. Induces apoptosis in a variety of cell types. Induces osteogenic differentiation of human mesenchymal stem cells.

100 mg

## Dorsomorphin

AMPK inhibitor. Enhances the differentiation from PSCs from cardiomyocyte. Along with SB 431542 and CHIR99021, enhances the differentiation to PSCs.

10 mg

## Forskolin

Useful activator of adenylate cyclase. Induces stem cell neuronal differentiation. Cell permeable and active in vivo.

10 mg, 25 mg

## IBMX

Pan-specific inhibitor of phosphodiesterases. Inhibition of PDEs leads to increased concentration of intracellular cAMP which activates PKA2. Increase cell differentiation, decrease proliferation, and induce apoptosis.

100 mg, 250 mg

## trans-ISRIB

Integrated stress response inhibitor.

5 mg

## IWP-2

PORCN inhibitor; inhibits processing and secretion of Wnt. Enhances the differentiation from PSCs to cardiomyocyte.

10 mg

## IWR-1-endo

Potent inhibitor of Wnt signaling. Promotes self-renewal and maintains pluripotency of human embryonic stem cells. Promotes differentiation of pluripotent stem cells into cardiomyocytes

10 mg

## LDN 193189

Potent and selective inhibitor of ALK2 and ALK3, thereby inhibiting SMAD1/5/8 phosphorylation. Promotes neuronal differentiation of human pluripotent stem cells,

10 mg

## PD325901

Selective non-ATP competitive MEK inhibitor. Enhances self-renewal of embryonic stem cells. In combination with vitamin C, synergistically induces hypomethylation of mouse embryonic stem cells.

10 mg

## RepSox

Potent inhibitor of the TGF- $\beta$  type I receptor (ALK5), RepSox can replace Sox2 in reprogramming adult cells into pluripotent stem cells via induction of Nanog transcription. It was able to convert astrocytes into neuronal cells as part of a small molecule cocktail (along with valproic acid and CHIR99021).

10 mg

## Rosiglitazone

Prototypical TZD antidiabetic agent. Potent and selective PPAR $\gamma$  agonist. Induces differentiation of pluripotent stem cells into adipocytes5.

10 mg

## SB431542

TGF- $\beta$ RI, ALK4 and ALK7 inhibitor. Improves reprogramming efficiency along with PO0325901 or thiazovivin.

10 mg

## Thiazovivin

TGF- $\beta$ RI, ALK4 and ALK7 inhibitor. Improves reprogramming efficiency along with PO0325901 or thiazovivin.

5 mg

## XAV 939

Tankyrase inhibitor. Antagonizes Wnt signaling downstream of receptor activation via stabilization of axin, a negative regulator of  $\beta$ -catenin. Robustly induces cardiomyogenesis of stem cells.

10 mg

## Y-27632

P160ROCK inhibitor. Blocks apoptosis of dissociated PSCs and improves survival rate of cryopreserved PSCs.

5 mg, 25 mg, 150 mg





# Cytokines, Growth Factors and other Recombinant Proteins

## Recombinant Human Activin-A, Animal-free

18585 10 µg, 50 µg

## Recombinant Human BCL2

NU03051 100 µg

## Recombinant Human CDK2/ Cyclin A2 Complex

NU03042 10 µg, 100 µg

## Recombinant Human CDK2/ Cyclin E1 Complex

NU03041 10 µg, 100 µg

## Recombinant Human EGF

OL3 50 µg

## Recombinant Human FGF-basic, Animal-free

NU0005 10 µg, 50 µg

## Thermostable Recombinant FGF-2 (FGF-2 STAB®)

PL9 50 µg

## Recombinant Human FGF-2

PL1 50 µg

## Recombinant Bovine FGF-2

PL2 50 µg

## Recombinant Human IGF-1 LR-3

OL11 50 µg

## Recombinant Human Insulin, Animal-free

12878 50 mg, 250 mg

## Recombinant Human KGF (FGF-7), Animal-free

SP-KGF-R 10 µg, 50 µg

## Recombinant Human Kras Wild-Type (WT)

GST-Tag NU03043 50 µg

GST-Tag, GDP Loaded NU03043-1G 50 µg

GST-Tag, GppNHp Loaded NU03043-1GP 50 µg

## Recombinant Human Kras (G12C)

GST-Tag NU03044 50 µg

GST-Tag, GDP Loaded NU03044-1G 50 µg

GST-Tag, GppNHp Loaded NU03044-1GP 50 µg

His-Tag NU03019 50 µg

## Recombinant Human Kras (G12D)

GST-Tag NU03045 50 µg

GST-Tag, GDP Loaded NU03045-1G 50 µg

GST-Tag, GppNHp Loaded NU03045-1GP 50 µg

## Recombinant Human Kras (G12R)

GST-Tag NU03046 50 µg

GST-Tag, GDP Loaded NU03046-1G 50 µg

GST-Tag, GppNHp Loaded NU03046-1GP 50 µg

## Recombinant Human Kras (G12V)

GST-Tag NU03047 50 µg

GST-Tag, GDP Loaded NU03047-1G 50 µg

GST-Tag, GppNHp Loaded NU03047-1GP 50 µg





# Cytokines, Growth Factors and other Recombinant Proteins

Recombinant Human LIF  
NU0013

Recombinant Mouse LIF  
NU0012

Recombinant Human MALT1  
NU03055 20 µg, 50 µg, 500 µg

Recombinant Human MNK2  
NU03023 10 µg, 100 µg

Recombinant Human MNK2,  
His-tagged  
NU03024 10 µg, 100 µg

Recombinant Human MNK2  
(D228G)  
NU03049 10 µg, 100 µg

Recombinant Human MNK2  
(D228G) His-tagged  
NU03050 10 µg, 100 µg

Recombinant Human ME1  
NU03052 10 µg, 25 µg, 100 µg

Recombinant Human ME2  
NU03053 10 µg, 25 µg, 100 µg

Recombinant Human ME3  
NU03054 10 µg, 50 µg, 100 µg

Recombinant Human PKM2  
NU03006 10 µg, 100 µg

Recombinant Human RBD-Raf-1,  
His-Tag  
NU03056-1 100 µg

Recombinant Human SCF,  
Animal-free  
SP-SCF-R 10 µg, 50 µg

Recombinant Human Sonic  
Hedgehog (SHH)  
NU03018 25 µg, 100 µg

Recombinant Human SOS1  
NU03057 100 µg

Recombinant Human SOS1,  
His-Avi-tagged  
NU03048 100 µg

Recombinant Human Serum  
Albumin, Animal-free  
19597 1 g, 5 g  
NU12880-10G 10 g

Recombinant Human Transferrin,  
Animal-free  
NU03060 1 g, 10 g

Recombinant Human VEGF-165  
NU03013 10 µg, 100 µg

Recombinant Human Vitronectin-  
398™, Xeno-free  
NU0006 500 µg





# Cytokines, Growth Factors and other Recombinant Proteins

## StemBeads® : Controlled-release Reagents

### StemBeads® FGF2

SB501 1 mL  
SB502 3 mL

### EFG2 Discs; 10 ng/mL in 2mL

DSC500S 12 Discs  
DSC500-48 48 Discs

### StemBeads® EGF

SBEGF 3 mL

### EFG2 Discs; 10 ng/mL in 1mL

DSC505-48 48 Discs

### StemBeads® Activin-A

SBAC1 1 mL  
SBAC5 5 mL

### BDNF Discs; 5 ng/mL in 2mL

DSCBD1-12 12 Discs

### StemBeads® Blank15

SB001 3 mL

### GDNF Discs; 5 ng/mL in 2mL

DSCGD1-12 12 Discs

### StemBeads® BDNF

SBBD1 1 mL

### StemBeads® GDNF

SBGD1 1 mL

