

# Stem Cells Neurogenesis

Under normal conditions, neurogenesis occurs in the mammalian brain throughout life and appears to be essential for memory and mood control. The possibility of controlling or modifying this process through the use of small molecules is of great interest in the development of drugs which will lead to regenerative treatments for neurodegenerative conditions including: stroke, MS, Alzheimer's disease, Parkinson's disease and Huntington's disease.

## Neurodazine

When used in conjunction with a microtubule-destabilizing agent neurodazine induces the generation of new nerve cells from either mature skeletal muscle or immature, differentiated myotubes.<sup>1</sup>

**Product No: 10-4515** **5 mg** **25 mg**

## ICG-001

Selectively blocks interaction between  $\beta$ -catenin and CBP and antagonizes  $\beta$ -catenin/TCF-mediated transcription. ICG-001 has been demonstrated to correct defects in neuronal stem cell differentiation via the inhibition of the Wnt/ $\beta$ -catenin pathway and the associated polytopic protein Presenilin-1.<sup>2</sup>

**Product No: 10-4378** **5 mg** **25 mg**

## ISX9

Increases the expression of neurogenic differentiation 1 (NeuroD1) transcription factor by activating  $Ca^{+2}$  influx. ISX9 has been shown to stimulate neurogenesis via a Mef2 dependent pathway both *in vitro* and *in vivo* and to improve hippocampal function and enhance memory in mice.<sup>3</sup>

**Product No: 10-1357** **5 mg** **25 mg**

## 24,25-Epoxycholesterol

Liver X receptors are critical for midbrain neurogenesis *in vivo*. The LXR-ligand, 24,25-epoxycholesterol is especially potent at promoting the differentiation of dopaminergic neurons<sup>4</sup> suggesting that targeted regenerative treatments for specific neuronal subtypes may be possible.

**Product No: 10-1330** **1 mg** **5 mg**

## LDN-193189 HCl

Potent and selective inhibitor of ALK2 ( $IC_{50} = 5$  nM) and ALK3 ( $IC_{50} = 30$  nM).<sup>5</sup> Promotes neuronal differentiation of human PSC's.<sup>6,7</sup>

**Product No: 10-4764** **5 mg** **25 mg**

## Synaptamide

Stimulates neurite growth, synaptogenesis and glutamatergic synaptic activity in developing hippocampal neurons at 10-100nM.<sup>8</sup> Potently induces neuronal differentiation of neural stem cells.<sup>9</sup> Endogenous ligand for GPR110.<sup>10</sup>

**Product No: 10-1194** **5 mg** **25 mg**

## LM11A-31

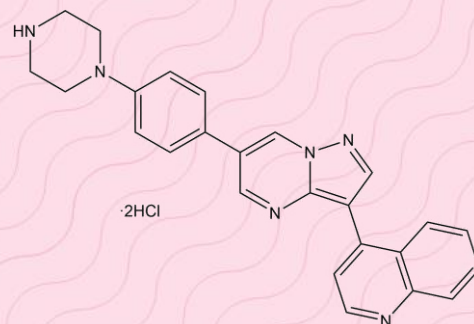
Nonpeptide neurotrophic factor receptor p75 (p75NTR) agonist which promotes survival signaling in neurotrophin-responsive cells.<sup>11</sup> Protects neurogenesis after traumatic brain injury.<sup>12</sup>

**Product No: 10-1526** **5 mg** **25 mg**

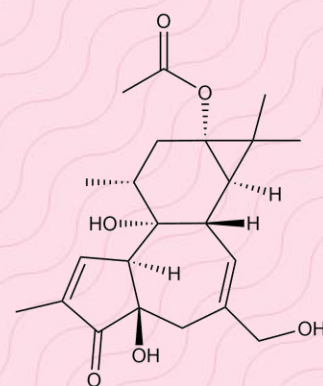
## Prostratin

Phorbol ester that promotes adult neurogenesis by inducing neural progenitor cell proliferation via PKC activation.<sup>13</sup>

**Product No: 10-2169** **1 mg** **5 mg**



**LDN-193189 HCl**



**Prostratin**

## REFERENCES

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