



Catalog Number:	MC11012	Product Type:	Small Molecule
Bio-Activity:	Neurogenic differentiation inducer	CAS #:	832115-62-5
Research Categories:	Neuroscience, stem cells	Chemical Name:	N-cyclopropyl-5-(2-thienyl)-3-isoxazolecarboxamide
Solubility:	Soluble in DMSO (up to 60 mg/ml) or in Ethanol (up to 16 mg/ml).	Molecular Formula:	C11H10N2O2S
Purity:	> 98%	Molecular Weight:	234.28
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

ISX9 promotes neurogenesis *in vivo*, promoting the proliferation and differentiation of hippocampal subgranular zone neuroblasts. It also has been shown to enhance memory (1). ISX9 leads to neuronal differentiation in adult neural stem cells (2). It has also been shown to make pancreatic β cells produce more insulin (3). ISX9 blocks malignant astrocyte proliferation, downregulates their astrocyte character, induces reentry into the cell cycle and upregulates neuronal gene expression (4). In rat dentate gyrus, ISX9 has been shown to potentiate cell proliferation and neuronal commitment (5).

References:

- 1) Petrik et al. (2012), Functional and mechanistic exploration of an adult neurogenesis-promoting small molecule; *FASEB J.*, 26 3148
- 2) Schneider et al. (2008), Small-molecule activation of neuronal cell fate; *Nat. Chem. Biol.*, 4 408
- 3) Dioum et al. (2011), A small molecule differentiation inducer increases insulin production by pancreatic β cells; *Proc. Natl. Acad. Sci. USA*, 108 20713
- 4) Zhang et al. (2011), Small molecule blocks malignant astrocyte proliferation and induces neuronal gene expression; *Differentiation*, 81 233

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4) Ali et al. (2016) Induction of sensory neurons from neuroepithelial stem cells by the ISX9 small molecule; *Am. J. Stem. Cells* 5 19

5) Bettio et al. (2016) ISX-9 can potentiate cell proliferation and neuronal commitment in the rat dentate gyrus; *Neuroscience*, 332 212

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