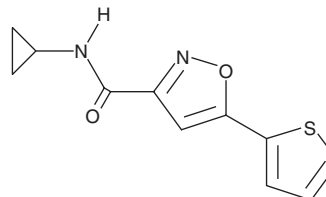


PRODUCT INFORMATION



ISX-9 Item No.

CAS Registry No.: 16165
Formal Name: N-cyclopropyl-5-(2-thienyl)-3-isoxazolecarboxamide
Synonyms: Isoxazole 9, Neuronal Differentiation Inducer III
MF: C₁₁H₁₀N₂O₂S
FW: 234.3
Purity: ≥95%
UV/Vis.: λ_{max}: 294 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ISX-9 is supplied as a crystalline solid. A stock solution may be made by dissolving the ISX-9 in the solvent of choice, which should be purged with an inert gas. ISX-9 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ISX-9 in these solvents is approximately 1, 20, and 30 mg/ml, respectively.

ISX-9 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ISX-9 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ISX-9 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ISX-9 is a small molecule inducer of adult neural stem cell differentiation both *in vitro* and *in vivo*. At 2.5-20 μM, ISX-9 has been shown to dose-dependently trigger neurogenesis and block gliogenesis in adult rat hippocampal stem cells through a calcium-activated signaling pathway dependent on myocyte-enhancer factor 2-dependent gene expression.¹⁻³ ISX-9 administered at 20 mg/kg for 12 days to mice has been reported to improve hippocampal function as evidenced by enhanced spatial memory ability in the Morris water maze test.³

References

- Schneider, J.W., Gao, Z., Li, S., *et al.* Small-molecule activation of neuronal cell fate. *Nat. Chem. Biol.* **4**(7), 408-410 (2008).
- Li, H., Radford, J.C., Ragusa, M.J., *et al.* Transcription factor MEF2C influences neural stem/progenitor cell differentiation and maturation *in vivo*. *Proc. Natl. Acad. Sci. USA* **105**(27), 9397-9402 (2008).
- Petrik, D., Jiang, Y., Birnbaum, S.G., *et al.* Functional and mechanistic exploration of an adult neurogenesis-promoting small molecule. *FASEB J.* **26**(8), 3148-3162 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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