

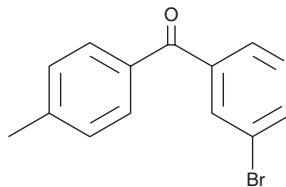
PRODUCT INFORMATION



Cuspin-1

Item No. 18526

CAS Registry No.: 337932-29-3
Formal Name: (5-bromo-3-pyridinyl)(4-methylphenyl)-methanone
Synonym: Chemical Upregulator of SMN Protein-1
MF: C₁₃H₁₀BrNO
FW: 276.1
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 270 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

Cuspin-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the cuspin-1 in the solvent of choice, which should be purged with an inert gas. Cuspin-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of cuspin-1 in these solvents is approximately 1, 16, and 25 mg/ml, respectively.

Cuspin-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cuspin-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cuspin-1 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

The Survival of Motor Neurons (SMN) protein participates in RNA splicing. Decreases in SMN, typically a consequence of defects in the *smn1* gene, result in the death of motor neurons and lead to the neurodegenerative disease, spinal muscular atrophy (SMA).¹ Cuspin-1 is a small molecule upregulator of SMN that has been shown *in vitro* to increase levels of SMN in SMA patient fibroblasts by 50% at 18 μM.² Its mechanism of action is thought to involve increased phosphorylation of ERK to initiate Ras-Raf-MEK signaling, which results in an increased rate of SMN translation.²

References

- Burghes, A.H.M. and Beattie, C.E. Spinal muscular atrophy: Why do low levels of SMN make motor neurons sick? *Nat. Rev. Neurosci.* **10(8)**, 597-609 (2009).
- Letso, R.R., Bauer, A.J., Lunn, M.R., *et al.* Small molecule screen reveals regulation of survival motor neuron protein abundance by Ras proteins. *ACS Chem. Biol.* **8(5)**, 914-922 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/15/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM