

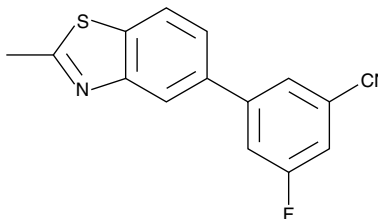
Product Information



VU0360223

Item No. 11995

CAS Registry No.: 1274859-33-4
Formal Name: 3-fluoro-5-(2-methyl-5-benzothiazolyl)-benzonitrile
Synonym: CAY10651
MF: C₁₅H₉FN₂S
FW: 268.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 235 nm



Laboratory Procedures

For long term storage, we suggest that VU0360223 be stored as supplied at -20°C. It should be stable for at least two years.

VU0360223 is supplied as a crystalline solid. A stock solution may be made by dissolving the VU0360223 in the solvent of choice. VU0360223 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of VU0360223 in these solvents is approximately 10 and 16 mg/ml, respectively.

VU0360223 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, VU0360223 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. VU0360223 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Glutamate, the major excitatory neurotransmitter in the central nervous system, signals through both ionotropic and metabotropic glutamate receptors. Of the eight metabotropic glutamate receptors (mGlu) discovered thus far, development of inhibitors to mGlu₅ has been given significant attention in preclinical models of disease, including pain, anxiety, gastroesophageal reflux disease, Parkinson's associated dyskinesia, and fragile X syndrome, as well as in animal models of drug addiction. VU0360223 is a noncompetitive antagonist (negative allosteric modulator) of mGlu₅ that demonstrates an IC₅₀ value of 61 nM in a calcium mobilization assay and a K_i value of 477 nM in a radioligand binding assay.¹ A 10 μM concentration of VU0360223 results in a near complete blockade of the glutamate response in cortical astrocytes.¹ A 30 mg/kg dose of VU0360223 in mice yields potent inhibition in a marble burying model of anxiety and is efficacious in an operant sensation seeking model of addiction.¹

Reference

1. Lindsley, C.W., Bates, B.S., Menon, U.N., *et al.* (3-Cyano-5-fluorophenyl)biaryl negative allosteric modulators of mGlu₅: Discovery of a new tool compound with activity in the OSS mouse model of addiction. *ACS Chem. Neurosci.* (2011).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11995

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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