

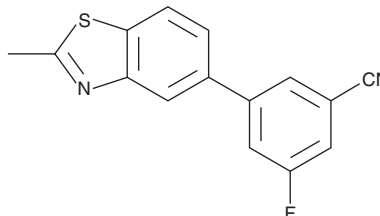
PRODUCT INFORMATION



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%
UV/Vis.: λ_{max}: 235 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

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

Description

Glutamate, the major excitatory neurotransmitter in the central nervous system, signals through both ionotropic and metabotropic glutamate receptors. Of the eight metabotropic glutamate receptors (mGlu₅) 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).

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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