

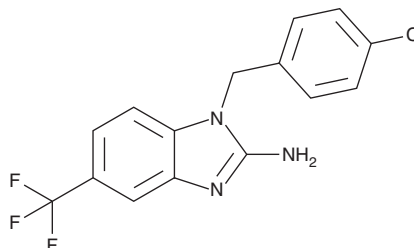
PRODUCT INFORMATION



NS 638

Item No. 37193

CAS Registry No.: 150493-34-8
Formal Name: 1-[(4-chlorophenyl)methyl]-5-(trifluoromethyl)-1H-benzimidazol-2-amine
MF: C₁₅H₁₁ClF₃N₃
FW: 325.7
Purity: ≥95%
Supplied as: A 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

NS 638 is supplied as a solid. A stock solution may be made by dissolving the NS 638 in the solvent of choice, which should be purged with an inert gas. NS 638 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NS 638 in ethanol is approximately 2 mg/ml and approximately 5 mg/ml in DMSO and DMF.

Description

NS 638 is an inhibitor of the N-type voltage-gated calcium channel Ca_v2.2 and CNS L-type calcium channels.¹ It inhibits potassium-induced calcium uptake in chick cortical synaptosomes (IC₅₀ = 3.4 μM) and AMPA-induced GABA release from primary chick cortical neurons (IC₅₀ = 4.3 μM), effects that can be blocked by the N-type calcium channel inhibitor ω-conotoxin GVIA (Item No. 24114) but not the L-type calcium channel inhibitor nifedipine (Item No. 11106). It also inhibits potassium-induced calcium level increases in primary chick cerebellar granule cells (IC₅₀ = 3.4 μM), an effect that can be blocked by nifedipine but not ω-conotoxin GVIA. NS 638 (50 mg/kg) reduces infarct volume in a mouse model of focal ischemia induced by middle cerebral artery occlusion (MCAO) but not in a gerbil model of global ischemia induced by bilateral carotid artery occlusion (BCAO).

Reference

1. Møller, A., Christophersen, P., Drejer, J., *et al.* Pharmacological profile and anti-ischemic properties of the Ca²⁺-channel blocker NS-638. *Neurol. Res.* **17**(5), 353-360 (1995).

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, 12/21/2022

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