

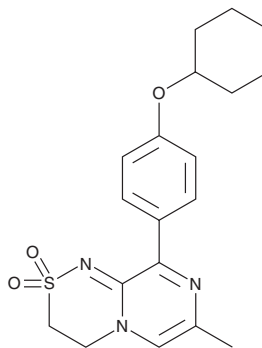
PRODUCT INFORMATION



TAK-653

Item No. 42187

CAS Registry No.: 1358751-06-0
Formal Name: 9-[4-(cyclohexyloxy)phenyl]-3,4-dihydro-7-methyl-pyrazino[2,1-c][1,2,4]thiadiazine, 2,2-dioxide
Synonym: NBI 1065845
MF: C₁₉H₂₃N₃O₃S
FW: 373.5
Purity: ≥98%
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

TAK-653 is supplied as a solid. A stock solution may be made by dissolving the TAK-653 in the solvent of choice, which should be purged with an inert gas. TAK-653 is slightly soluble (0.1-1 mg/ml) in DMSO.

Description

TAK-653 is an AMPA receptor positive allosteric modulator (PAM).¹ It increases glutamate-induced calcium influx in CHO cells expressing human AMPA receptors ($EC_{50} = 3.3 \mu\text{M}$). TAK-653 potentiates AMPA receptor-mediated currents in rat primary hippocampal neurons ($EC_{50} = 4.4 \mu\text{M}$). *In vivo*, TAK-653 (0.1-10 mg/kg) ameliorates MK-801-induced working memory deficits in the radial arm maze task in rats. It increases accuracy in the delayed match-to-sample (DMTS) test in cynomolgus monkeys when administered at a dose of 0.06 mg/kg.

Reference

1. Suzuki, A., Kunugi, A., Tajima, Y., et al. Strictly regulated agonist-dependent activation of AMPA-R is the key characteristic of TAK-653 for robust synaptic responses and cognitive improvement. *Sci. Rep.* **11**(1), 14532 (2021).

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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