

Certificate of Analysis

Print Date: Nov 30th 2020

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Product Name: TM 38837 Catalog No.: 7131 Batch No.: 1

CAS Number: 1253641-65-4

IUPAC Name: 1-(2,4-Dichlorophenyl)-4-ethyl-*N*-1-piperidinyl-5-[5-[2-[4-(trifluoromethyl)phenyl]ethynyl]-2-thienyl]-1*H*-pyrazole-3-

carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₀H₂₅Cl₂F₃N₄OS

Batch Molecular Weight: 617.51 **Physical Appearance:** White solid

Solubility: DMSO to 20 mM

ethanol to 20 mM

Storage: Store at -20°C

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows 98.6% purity

¹H NMR: Consistent with structure Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 58.35 4.08 9.07 Found 58.12 4.03 8.97

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use



Product Information

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Description:

Highly potent cannabinoid 1 receptor (CB₁) inverse agonist (IC₅₀ values are 8.5 nM and 605 nM for inhibition of [³H]-CP 55940 binding at CB₁ and CB₂ receptors, respectively). Displays 71-fold selectivity for CB₁ receptors over CB₂ receptors. Inhibits GTP binding to CB₁-overexpressing cell membranes in vitro (EC₅₀ = 18.5 nM). Peripherally restricted. Promotes fear behaviors when given by intracerebrovascular (icv) injection in mice.

Physical and Chemical Properties:

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Batch Molecular Weight: 617.51 Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 20 mM ethanol to 20 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Micale *et al* (2019) The cannabinoid CB₁ antagonist TM38837 with limited penetrance to the brain shows reduced fear-promoting effects in mice. Front.Pharmacol. *10*. PMID: 30949045.

Takano *et al* (2014) Low brain CB₁ receptor occupancy by a second generation CB₁ receptor antagonist TM38837 in comparison with rimonabant in nonhuman primates: a PET study. Synapse. *68* 89. PMID: 24293119.

Hung *et al* (2010) Discovery of 1-(2,4-dichlorophenyl)-4-ethyl-5-(5-(2-(4-(trifluoromethyl)phenyl)ethynyl)thiophen-2-yl)-*N*-(piperidin-1-yl) -1*H*-pyrazole-3-carboxamide as a potential peripheral cannabinoid-1 receptor inverse agonist. Chem.Med.Chem. *5* 1439. PMID: 20652930.

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