

Certificate of Analysis

Product Name: YM 58483

Catalog No.: 3939

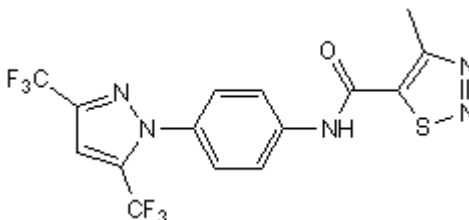
Batch No.: 2

CAS Number: 223499-30-7

IUPAC Name: *N*-[4-[3,5-Bis(trifluoromethyl)-1*H*-pyrazol-1-yl]phenyl]-4-methyl-1,2,3-thiadiazole-5-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₉F₆N₅OS
Batch Molecular Weight: 421.32
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Dichloromethane:Ethyl acetate [95:5])
HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	42.76	2.15	16.62
Found	42.68	2.09	16.51

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

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Description:

Blocker of store-operated Ca²⁺ entry (SOCE), which mediates the activation of non-excitabile cells (e.g. lymphocytes). Inhibits calcium release-activated calcium (CRAC) channels; suppresses thapsigargin-induced sustained Ca²⁺ influx (IC₅₀ = 100 nM). Displays immuno-modulatory and anti-inflammatory effects; suppresses cytokine production and proliferation of T cells *in vitro*.

Physical and Chemical Properties:

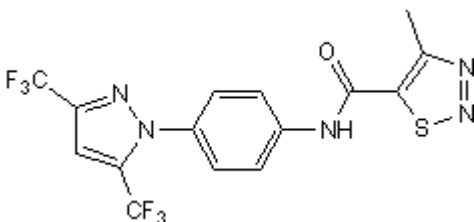
Batch Molecular Formula: C₁₅H₉F₆N₅OS

Batch Molecular Weight: 421.32

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Ishikawa *et al* (2003) A pyrazole derivative, YM-58483, potently inhibits store-operated sustained Ca²⁺ influx and IL-2 production in T lymphocytes. *J.Immunol.* **170** 4441. PMID: 12707319.

Zitt *et al* (2004) Potent inhibition of Ca²⁺ release-activated Ca²⁺ channels and T-lymphocyte activation by the pyrazole derivative BTP2. *J.Biol.Chem.* **26** 12427.

Ohga *et al* (2008) Characterization of YM-58483/BTP2, a novel store-operated Ca²⁺ entry blocker, on T cell-mediated immune responses *in vivo*. *Int.Immunopharmacol.* **8** 1787.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 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.

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