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Print Date: Mar 14th 2022

Certificate of Analysis

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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: $C_{15}H_9F_6N_5OS$

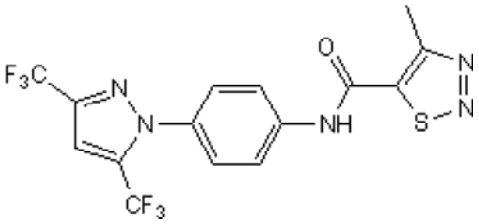
Batch Molecular Weight: 421.32

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

^{1}H 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

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Description:

YM 58483 is a blocker of store-operated Ca^{2+} entry (SOCE), which mediates the activation of non-excitable cells (e.g. lymphocytes). Inhibits calcium release-activated calcium (CRAC) channels; suppresses thapsigargin-induced sustained Ca^{2+} influx (IC_{50} = 100 nM). Displays immuno-modulatory and anti-inflammatory effects; suppresses cytokine production and proliferation of T cells in vitro.

Physical and Chemical Properties:

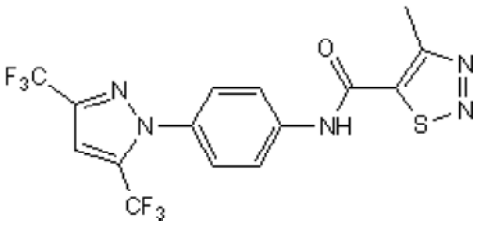
Batch Molecular Formula: $C_{15}H_9F_6N_5OS$

Batch Molecular Weight: 421.32

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



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.

References:

Ohga *et al* (2008) Characterization of YM-58483/BTP2, a novel store-operated Ca^{2+} entry blocker, on T cell-mediated immune responses *in vivo*. Int.Immunopharmocol. ***8*** 1787. PMID: 18793756.

Zitt *et al* (2004) Potent inhibition of Ca^{2+} release-activated Ca^{2+} channels and T-lymphocyte activation by the pyrazole derivative BTP2. J.Biol.Chem. ***26*** 12427. PMID: 14718545.

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