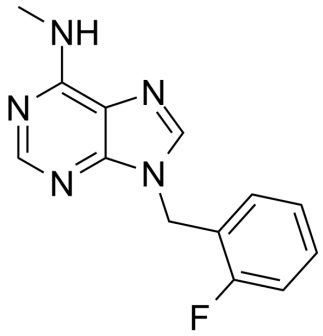
BW-A 78U

Cat. No.:	HY-100118
CAS No.:	101155-02-6
Molecular Formula:	$C_{13}H_{12}FN_5$
Molecular Weight:	257.27
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 150 mg/mL (583.05 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8870 mL	19.4348 mL	38.8697 mL
	5 mM	0.7774 mL	3.8870 mL	7.7739 mL
	10 mM	0.3887 mL	1.9435 mL	3.8870 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BW-A 78U is a PDE4 inhibitor with an IC_{50} of 3 μM.

IC_{50} & Target

PDE4
3 μM (IC_{50})

In Vitro

BW-A 78U is a PDE4 inhibitor with an IC_{50} of 3 μM. BW-A 78U fails to significantly inhibit arachidonate release. BW-A 78U is ineffective to inhibit the lipopolysaccharide (LPS)-induced TNF-α release[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

Mononuclear cells are incubated for 30 min with BW-A 78U at the concentration of 10 nM to 10 μM. The cells are then stimulated with lipopolysaccharide (10 μg/mL) overnight at 37°C in an atmosphere of 5% CO_2 at 100% humidity. Cell-free supernatants are collected, centrifuged (2000 g), and stored frozen at -20°C before TNF-α determination. TNF-α concentrations in cell culture supernatants are determined by specific ELISA using a commercial kit. Sensitivity of the assay is 1 pg/mL. The absorbance at 450 nm is assessed with an ELISA reader[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Boichot E, et al. Anti-inflammatory activities of a new series of selective phosphodiesterase 4 inhibitors derivedfrom 9-benzyladenine. J Pharmacol Exp Ther. 2000 Feb;292(2):647-53.

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