Pamapimod

Cat. No.: HY-10405

CAS No.: 449811-01-2

Molecular Formula: $C_{19}H_{20}F_2N_4O_4$

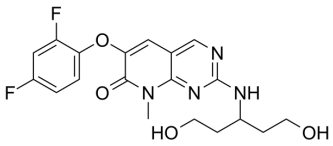
Molecular Weight: 406.38

Target: p38 MAPK; Autophagy

Pathway: MAPK/ERK Pathway; Autophagy

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 : ≥ 34 mg/mL (83.67 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4608 mL	12.3038 mL	24.6075 mL
5 mM	0.4922 mL	2.4608 mL	4.9215 mL
10 mM	0.2461 mL	1.2304 mL	2.4608 mL

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

BIOLOGICAL ACTIVITY

Description

Pamapimod (Ro4402257) is a potent, selective and orally active p38 MAPK inhibitor with IC_{50}s of 14 nM and 480 nM and K_is of 1.3 nM and 120 nM for p38α and p38β, respectively. Pamapimod has no activity against p38δ or p38γ isoforms. Pamapimod has the potential for rheumatoid arthritis and other autoimmune diseases treatment[1].

IC_{50} & Target

p38α 14 nM (IC_{50})	p38α 1.3 nM (Ki)	p38β 480 (IC_{50})	p38β 120 nM (Ki)

In Vitro

Pamapimod binds to JNK kinases with K_i values of 190 nM, 16 nM and 19 nM for Jnk1, Jnk2 and Jnk3, respectively[1].
After lipopolysaccharide (LPS) stimulation of the human myelomonocytic cell line (THP-1), secretion of TNF-α is inhibited by Pamapimod, with an EC_{50} of 25 nM. Pamapimod suppresses TNF-α and IL-1β production in whole blood, with EC_{50} values of 0.40 and 0.10 μM, respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Pamapimod (0-150 mg/kg; oral gavage; once daily; DBA/1J female mice) treatment reduces inflammation and bone loss in

murine collagen-induced arthritis[1].

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

Animal Model:	DBA/1J female mice (8-10 weeks of age) induced murine collagen[1]
Dosage:	0 mg/kg, 3 mg/kg, 10 mg/kg, 30 mg/kg, 90 mg/kg, 150 mg/kg
Administration:	Oral gavage; once daily
Result:	Reduced inflammation and bone loss.

REFERENCES

[1]. Hill, R. J. et al. Pamapimod, a novel p38 mitogen-activated protein kinase inhibitor: preclinical analysis of efficacy and selectivity. The Journal of pharmacology and experimental therapeutics 327, 610-619, doi:10.1124/jpet.108.139006 (2008).

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA