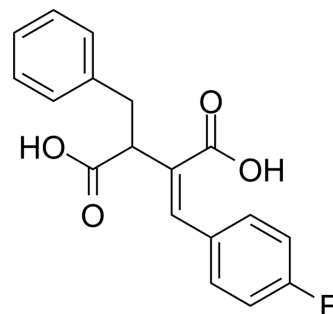


IRG1-IN-1

Cat. No.:	HY-148335
CAS No.:	2407652-42-8
Molecular Formula:	C ₁₈ H ₁₅ FO ₄
Molecular Weight:	314.31
Target:	Others
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (318.16 mM; Need ultrasonic)					
		Solvent Concentration	Mass			
	Preparing Stock Solutions			1 mg	5 mg	10 mg
		1 mM		3.1816 mL	15.9079 mL	31.8157 mL
		5 mM		0.6363 mL	3.1816 mL	6.3631 mL
	10 mM		0.3182 mL	1.5908 mL	3.1816 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (7.95 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.95 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.95 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	IRG1-IN-1 is an itaconic acid derivative. IRG1-IN-1 can inhibit immune-responsive gene 1 (IRG1) activity. IRG1-IN-1 can be used for the research of cancer, inflammation and autoimmune diseases ^[1] .
In Vitro	<p>IRG1-IN-1(compound 6) (0.5 mM; 2 mM) reduces production of itaconic acid and the secretion of TNFα from LPS-stimulated human monocyte derived macrophages (hMDMs) ^[1].</p> <p>IRG1-IN-1 (0.5 mM; 1 mM) inhibits the proliferation of C-IRG1-9 rat glioma cells^[1].</p> <p>IRG1-IN-1(10 nM) increases proliferation of TCR-activated hCD8⁺ T cells^[1].</p> <p>IRG1-IN-1(10μM) shows depletion of trimethylation of histone 3 at lysine 4 (H3K4me3) in CR-activated hCD8⁺ T cells^[1].</p>

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

Western Blot Analysis^[1]

Cell Line:	TCR-activated hCD8 ⁺ T cells
Concentration:	10 μM
Incubation Time:	24-72 h
Result:	Decreased protein levels of histone 3 (H3).

Cell Proliferation Assay^[1]

Cell Line:	C-IRG1-9 rat glioma cells and TCR-activated hCD8 ⁺ T cells
Concentration:	0.5 mM; 1 mM; 10 nM
Incubation Time:	48-96 h
Result:	Inhibited the proliferation of C-IRG1-9 rat glioma cells and increased proliferation of TCR-activated hCD8 ⁺ T cells.

In Vivo

IRG1-IN-1 (compound 6) (i.p.; 0.2 mg/kg; 27 days) shows antitumor effect in C57BL/6 mice^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice ^[1]
Dosage:	0.2 mg/kg
Administration:	IP; 27 days
Result:	Increased survival of C57BL/6 mice bearing mouse CT26 colorectal tumors. Decreased intratumoral frequency of M-MDSCs in tumors.

REFERENCES

[1]. Adonia Papanthassiu, et al. Compositions and methods of using itaconic acid derivatives. Patent. US20210261495A1.

Caution: Product has not been fully validated for medical applications. For research use only.

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