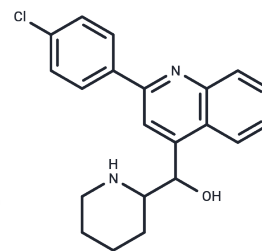


## Vacquinol-1

## Chemical Properties

CAS No. :	5428-80-8
Formula:	C <sub>21</sub> H <sub>21</sub> ClN <sub>2</sub> O
Molecular Weight:	352.86
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Vacquinol-1 is an MKK4 activator, which rapidly and selectively induces glioma cell death.
Targets(IC50)	JNK
In vitro	Vacquinol-1 induces rapid and specific cell death of glioma cells with IC <sub>50</sub> of 3.14 $\mu$ M via membrane ruffling, cell rounding, massive macropinocytic vacuole accumulation, ATP depletion, and cytoplasmic membrane rupture. [1]
In vivo	In mice bearing U3013 mg tumors, Vacquinol-1 (15 $\mu$ M intracranial injection, or 20 mg/kg p.o.) attenuates tumor growth and prolonging survival. [1]
Kinase Assay	1MT enantiomers are solubilized in DMSO containing 0.1N HCl and added at concentrations of 100, 50, and 0 $\mu$ M to wells containing the reaction mixture with tryptophan (0-200 $\mu$ M) followed by addition of IDO enzyme. Plates are sealed and incubated 1 hr in a humidified 37°C incubator, after which the reactions are terminated by addition of 12.5 $\mu$ l 30% TCA per well. Plates are then resealed in plastic wrap, incubated 30 min at 50°C to hydrolyze the reaction product N-formylkynurenine to kynurenine, and centrifuged. Supernatants are transferred to a flat-bottom 96-well plate, mixed with 100 $\mu$ l Ehrlich reagent and incubated 10 min at room temperature. Absorbance at 490 nm is read[1].
Cell Research	Cell viability is measured using CellTiter-Glo Luminescent Cell Viability Assay according to the manufacturer's instructions.(Only for Reference)

## Solubility Information

Solubility	H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 70 mg/mL (198.38 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.834 mL	14.1699 mL	28.3399 mL
5 mM	0.5668 mL	2.834 mL	5.668 mL
10 mM	0.2834 mL	1.417 mL	2.834 mL
50 mM	0.0567 mL	0.2834 mL	0.5668 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

### Reference

Kitambi SS, et al. Cell. 2014, 157(2), 313-328.

MAPK4 inhibits the early aberrant activation of B cells in rheumatoid arthritis by promoting the IRF4-SHIP1 signaling pathway

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