cis-Epoxysuccinic acid

Cat. No.: HY-125791

CAS No.: 16533-72-5

Molecular Formula: $C_4H_4O_5$

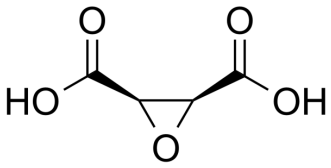
Molecular Weight: 132.07

Target: Succinate Receptor 1

Pathway: GPCR/G Protein

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 250 mg/mL (1892.94 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	7.5717 mL	37.8587 mL	75.7174 mL
5 mM	1.5143 mL	7.5717 mL	15.1435 mL
10 mM	0.7572 mL	3.7859 mL	7.5717 mL

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

BIOLOGICAL ACTIVITY

Description

cis-Epoxysuccinic acid is a succinate receptor (SUCNR1/GPR91) agonist. cis-Epoxysuccinic acid inhibits cAMP levels with an EC_{50} value of 2.7 μM. cis-Epoxysuccinic acid can be used for the research of cardiovascular system[1].

In Vitro

cis-Epoxysuccinic acid (1-100 μM; 10 min) affects cAMP levels of HEK293 cells[1].

cis-Epoxysuccinic acid (0.1 μM-100 mM; 1 h) agonists SUCNR1 pathways without affects succinate dehydrogenase[1].

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

Cell Viability Assay[1]

Cell Line:	HEK293 cells
Concentration:	1, 10 and 100 μM
Incubation Time:	10 min
Result:	Inhibited cAMP levels with an EC_{50} value of 2.7 μM.

Cell Viability Assay[1]

Cell Line:	HEK293 cells
Concentration:	0.1 μM-100 mM
Incubation Time:	1 hour
Result:	Induced the Gq pathway, recruited arrestin 3 and elicited $[Ca^{2+}]_i$ mobilization with EC_{50} values of 42, 74 and 191 μM, respectively.

In Vivo

cis-Epoxysuccinic acid (1 mg/kg; i.v. once) has an effect on the blood pressure of rats[1].

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

Animal Model:	Male Wistar rats[1]
Dosage:	1 mg/kg
Administration:	Intravenous injection; 1 mg/kg once
Result:	Showed in vivo activity and increased blood pressure after injection.

REFERENCES

[1]. Geubelle P, et al. Identification and pharmacological characterization of succinate receptor agonists. Br J Pharmacol. 2017 May;174(9):796-808.

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