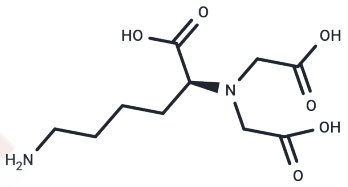
Data Sheet (Cat.No.T77989)

TargetMol

Lysine-N,N-diacetic acid

Chemical Properties



CAS No. :	113231-05-3
Formula:	C10H18N2O6
Molecular Weight:	262.26
Storage:	Keep away from moisture Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Lysine-N,N-diacetic acid (BCML) is a highly efficient TAS2R4 inhibitor, blocking the human TAS2R4-mediated response to quinine.
Targets(IC50)	Others,Taste receptor
In vitro	Lysine-N,N-diacetic acid is a competitive inhibitor with an IC50 of 59 nM for bitter taste receptor 4 (T2R4).59 nM Lysine-N,N-diacetic acid reduces the basal activity of H214A (the constitutively active mutant of T2R4) by 40% reduction in basal activity of H214A (the constitutively active mutant of T2R4). [1] 60 nM Lysine-N,N-diacetic acid, acting for 15 minutes, prevented the quinine-induced decrease in the basal activation state of Rac1, which occurred in HEK293T cells overexpressing T2R4 and Ga16/44, but was not observed in HEK293T wild-type cells. [2]

Solubility Information

Solubility	DMSO: 1 mg/mL (3.81 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.813 mL	19.065 mL	38.1301 mL
5 mM	0.7626 mL	3.813 mL	7.626 mL
10 mM	0.3813 mL	1.9065 mL	3.813 mL
50 mM	0.0763 mL	0.3813 mL	0.7626 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Pydi SP, et al. Amino acid derivatives as bitter taste receptor (T2R) blockers. J Biol Chem. 2014 Sep 5;289(36): 25054-66.
Sidhu C, et al. Regulation of Rac1 GTPase activity by quinine through G-protein and bitter taste receptor T2R4. Mol Cell Biochem. 2017 Feb;426(1-2):129-136.
Masamoto M, et al. Effects of bitter receptor antagonists on behavioral lick responses of mice. Neurosci Lett. 2020 Jun 21;730:135041.