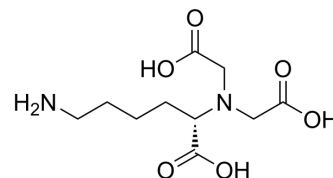


α,α -Bis(carboxymethyl)-L-lysine

Cat. No.:	HY-100047		
CAS No.:	113231-05-3		
Molecular Formula:	C ₁₀ H ₁₈ N ₂ O ₆		
Molecular Weight:	262.26		
Target:	Taste Receptor		
Pathway:	GPCR/G Protein		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 1.82 mg/mL (6.94 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.8130 mL	19.0650 mL	38.1301 mL
	5 mM	0.7626 mL	3.8130 mL	7.6260 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

α,α -Bis(carboxymethyl)-L-lysine is a competitive inhibitor of bitter taste receptor 4, with an IC₅₀ of 59 nM. α,α -Bis(carboxymethyl)-L-lysine can be used in bitter receptors related study^{[1][2][3]}.

In Vitro

α,α -Bis(carboxymethyl)-L-lysine (59 nM) decreases the basal activity of H214A (constitutively active mutant of T2R4) by 40%^[1].
 α,α -Bis(carboxymethyl)-L-lysine (60 nM, 15 mins) blocks the decrease of basal activation state of Rac1 caused by quinine in HEK293T cells overexpressing T2R4 and Ga16/44, but has no effect in HEK293T control cells^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

α,α -Bis(carboxymethyl)-L-lysine (10 μ M) has no effect on lick responses to bitter compounds in adult C57BL6/J^[3].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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- [1]. Pydi SP, et al. Amino acid derivatives as bitter taste receptor (T2R) blockers. J Biol Chem. 2014;289(36):25054-25066.
- [2]. Sidhu C, et al. Regulation of Rac1 GTPase activity by quinine through G-protein and bitter taste receptor T2R4. Mol Cell Biochem. 2017;426(1-2):129-136.
- [3]. Masamoto M, et al. Yoshida R. Effects of bitter receptor antagonists on behavioral lick responses of mice. Neurosci Lett. 2020;730:135041.
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Caution: Product has not been fully validated for medical applications. For research use only.

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