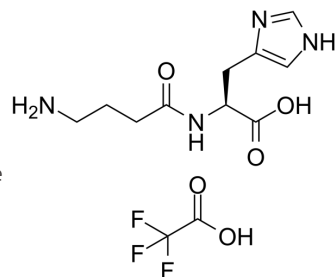


Homocarnosine TFA

Cat. No.:	HY-114883A
Molecular Formula:	C ₁₂ H ₁₇ F ₃ N ₄ O ₅
Molecular Weight:	354.28
Target:	GABA Receptor; Endogenous Metabolite
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 125 mg/mL (352.83 mM; Need ultrasonic)
DMSO : 100 mg/mL (282.26 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.8226 mL	14.1131 mL	28.2263 mL
	5 mM	0.5645 mL	2.8226 mL	5.6453 mL
	10 mM	0.2823 mL	1.4113 mL	2.8226 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 25 mg/mL (70.57 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Homocarnosine TFA is a dipeptide of γ-aminobutyric acid (GABA) and histidine unique to brain. Homocarnosine TFA is an inhibitory neuromodulator synthesized in the neuron from GABA and exhibiting anticonvulsant effects^[1]. Homocarnosine TFA has antioxidant and anti-inflammatory actions, prevention of DNA damage, and inhibition of advanced glycation end-product formation^[2].

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

Homocarnosine, a dipeptide of γ -aminobutyric acid (GABA) and histidine, is an inhibitory neuromodulator synthesized in subclasses of GABAergic neurons^[1].

?Homocarnosine is a potent alternative imidazole peptide for skeletal muscle based on its structural similarity to Carnosine.

Homocarnosine is composed of γ -aminobutyric acid (GABA) and histidine and has a similar structure to Carnosine, with the only difference being an extra carbon atom in GABA compared to that in β -alanine of carnosine. Homocarnosine possesses greater tolerance to degradation by serum carnosinase relative to Carnosine. Homocarnosine is known to be exclusively present in brain and cerebrospinal fluid and acts as a neuroprotective agent in a broad range of disease conditions.

Homocarnosine exerts antioxidant activity and prevent DNA oxidative damage to a similar extent as Carnosine^[2].

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

REFERENCES

[1]. Petroff OA, et al. Vigabatrin increases human brain homocarnosine and improves seizure control. *Ann Neurol.* 1998;44(6):948-952.

[2]. Kumrungsee T, et al. Dietary GABA induces endogenous synthesis of a novel imidazole peptide homocarnosine in mouse skeletal muscles. *Amino Acids.* 2020;52(5):743-753.

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