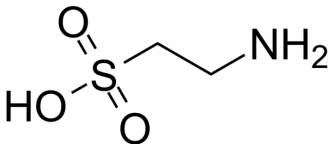
Taurine

Cat. No.:	HY-B0351
CAS No.:	107-35-7
Molecular Formula:	$C_2H_7NO_3S$
Molecular Weight:	125.15
Target:	Autophagy; Endogenous Metabolite
Pathway:	Autophagy; Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 25 mg/mL (199.76 mM; Need ultrasonic)
DMSO : 1 mg/mL (7.99 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	7.9904 mL	39.9521 mL	79.9041 mL
	5 mM	1.5981 mL	7.9904 mL	15.9808 mL
	10 mM	0.7990 mL	3.9952 mL	7.9904 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 12.5 mg/mL (99.88 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Taurine, a sulphur-containing amino acid and an organic osmolyte involved in cell volume regulation, provides a substrate for the formation of bile salts, and plays a role in the modulation of intracellular free calcium concentration. Taurine has the ability to activate autophagy in adipocytes[1][2][3].

IC_{50} & Target		
	Human Endogenous Metabolite	Human Endogenous Metabolite

In Vitro

Taurine is one of the most abundant amino acids in the brain and spinal cord, leukocytes, heart and muscle cells, the retina, and indeed almost every tissue throughout the body[1].
Taurine exhibits diverse biological actions, including protection against ischemia-reperfusion injury, modulation of intracellular calcium concentration, and antioxidant, antiatherogenic and blood pressure-lowering effects[2].

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

CUSTOMER VALIDATION

- Free Radic Biol Med. 2022 Nov 17;193(Pt 2):795-807.
- Front Cell Dev Biol. 2021 Apr 15;9:631163.
- Clin Chim Acta. 2023 Dec 16:117726.
- Microbiol Spectr. 2023 Jan 31;e0469822.
- bioRxiv. 2023 Jun 3.

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REFERENCES

[1]. Ripps H, Shen W. Review: taurine: a "very essential" amino acid. Mol Vis. 2012;18:2673-2686.

[2]. Xu YJ, et al. The potential health benefits of taurine in cardiovascular disease. Exp Clin Cardiol. 2008;13(2):57-65.

[3]. Kaneko H, et al. Taurine is an amino acid with the ability to activate autophagy in adipocytes. Amino Acids. 2018;50(5):527-535.

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