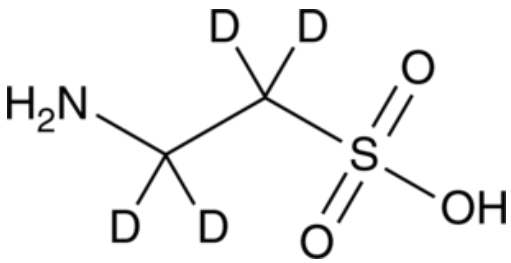
Product Data Sheet

Product Name: Taurine-d4
Cat. No.: GC49426

Chemical Properties

Cas. No.	342611-14-7		
SMILES	O=S(C([2H])([2H])C([2H])([2H])N)(O)=O		
Formula	C2H3D4NO3S	M.Wt	129.2
Solubility	PBS (pH 7.2): 10 mg/ml	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Taurine-d_4 is intended for use as an internal standard for the quantification of taurine by GC- or LC-MS. Taurine is a sulfur-containing amino acid produced endogenously and also ingested in the diet.[1] It is ubiquitously present in most cells and has diverse biological activities, including antioxidative, anticancer, cardioprotective, and neuroprotective properties.[1,2,3,4] It scavenges 2,2-diphenyl-1-picrylhydrazyl radicals when used at concentrations ranging from 125 to 1,000 µg/ml and decreases the viability of MCF-7 and MDA-MB-231 human breast cancer cells.[2] It prevents left ventricular dysfunction in the mdx mouse model of late-stage Duchenne muscular dystrophy when administered at a dose of 1 g/kg per day for six months.[3] Taurine (100 µM) prevents neurotoxicity induced by amyloid-β (Aβ) or the glutamate receptor agonists glutamate, NMDA , or kainic acid in chick embryonic retinal neurons, an effect that can be blocked by the $GABA_A$ receptor antagonist

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picrotoxin .[4]

1.Schaffer, S., and Kim, H.W.Effects and mechanisms of taurine as a therapeutic agentBiomol. Ther. (Seoul)26(3)225-241(2018) 2.Choi, E.-J., Tang, Y., Lee, C.B., et al.Investigation of antioxidant and anticancer potential of taurine by means of multiple chemical and biological assaysTaurine 9(2018) 3.Mele, A., Manturano, P., De Bellis, M., et al.A long-term treatment with taurine prevents cardiac dysfunction in mdx miceTransl. Res.20482-99(2019) 4.Louzada, P.R., Lima, A.C.P., MendonÇa-Silva, D.L., et al.Taurine prevents the neurotoxicity of ß-amyloid and glutamate receptor agonists: Activation of GABA receptors and possible implications for Alzheimer's disease and other neurological disordersFASEB J.18(3)511-518(2004)

Caution: Product has not been fully validated for medical applications. For research use only.
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