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- Trockeneiszuschlag
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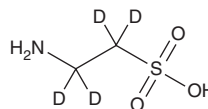
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PRODUCT INFORMATION



Taurine-d₄ Item No. 35211

CAS Registry No.: 342611-14-7
Formal Name: 2-amino-ethane-1,1,2,2-d₄-sulfonic acid
Synonym: β-Aminoethylsulfonic Acid-d₄
MF: C₂H₃D₄NO₃S
FW: 129.2
Chemical Purity: ≥95% (Taurine)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Taurine-d₄ is intended for use as an internal standard for the quantification of taurine (Item No. 27031) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

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.¹⁻⁴ It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) 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 (Item No. 14581), or kainic acid (Item No. 78050) in chick embryonic retinal neurons, an effect that can be blocked by the GABA_A receptor antagonist picrotoxin (Item No. 20771).⁴

References

1. Schaffer, S. and Kim, H.W. Effects and mechanisms of taurine as a therapeutic agent. *Biomol. 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 assays. *Taurine* 9 Eds. Marcinkiewica, J., Schaffer, S.W. *Springer* (2018).
3. Mele, A., Manturano, P., De Bellis, M., *et al.* A long-term treatment with taurine prevents cardiac dysfunction in *mdx* mice. *Transl. Res.* **204**, 82-99 (2019).
4. Louzada, P.R., Lima, A.C.P., Mendonça-Silva, D.L., *et al.* Taurine prevents the neurotoxicity of β-amyloid and glutamate receptor agonists: Activation of GABA receptors and possible implications for Alzheimer's disease and other neurological disorders. *FASEB J.* **18**(3), 511-518 (2004).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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