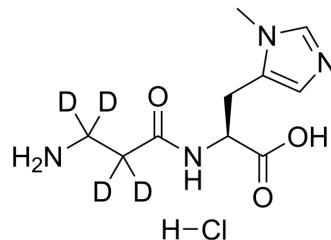


Anserine-d₄ hydrochloride

Cat. No.:	HY-113354S1
Molecular Formula:	C ₁₀ H ₁₃ D ₄ ClN ₄ O ₃
Molecular Weight:	280.74
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Anserine-d ₄ hydrochloride is the deuterium labeled Anserine (HY-113354). Anserine, a methylated form of Carnosine, is an orally active, natural Histidine-containing dipeptide found in skeletal muscle of vertebrates. Anserine is not cleaved by serum carnosinase and act as biochemical buffers, chelators, antioxidants, and anti-glycation agents. Anserine improves memory functions in Alzheimer's disease (AD)-model mice ^{[1][2][3]} .
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Jun Kaneko, et al. Anserine (beta-alanyl-3-methyl-L-histidine) improves neurovascular-unit dysfunction and spatial memory in aged AβPPswe/PSEN1dE9 Alzheimer's-model mice. *Sci Rep.* 2017 Oct 3;7(1):12571.
- [2]. Boldyrev AA, et al. The histidine-containing dipeptides, carnosine and anserine: distribution, properties and biological significance. *Adv Enzyme Regul.* 1990;30:175-94.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-220.

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

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