

Product Data Sheet

Product Name: Anserine-d4

Cat. No.: GC70371

Chemical Properties

Cas. No. 1201658-81-2

Formula $C_{10}H_{12}D_4N_4O_3$

M.Wt 244.28

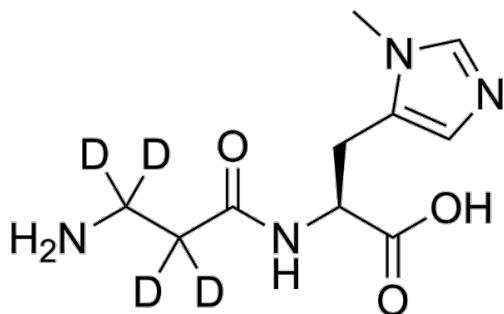
Solubility

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

Anserine-d4 is the deuterium labeled Anserine. 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].

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

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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drugs^[1].

References:

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [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]. Jun Kaneko, et al. Anserine (beta-alanyl-3-methyl-L-histidine) improves neurovascular-unit dysfunction and spatial memory in aged A β PPswe/PSEN1dE9 Alzheimer's-model mice. *Sci Rep*. 2017 Oct 3;7(1):12571.

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