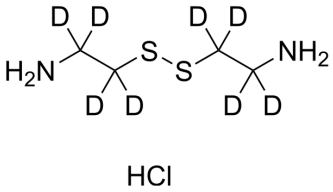
Cystamine-d_8 (dihydrochloride)

Cat. No.:	HY-W020050S
CAS No.:	2712126-51-5
Molecular Formula:	$C_4H_5D_8ClN_2S_2$
Molecular Weight:	196.79
Target:	Apoptosis; Caspase; Glutaminase
Pathway:	Apoptosis; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cystamine-d_8 (dihydrochloride) is the deuterium labeled Cystamine (dihydrochloride)[1]. Cystamine (dihydrochloride) is the disulfide form of the free thiol, cysteamine. Cystamine is an orally active transglutaminase (Tgase) inhibitor. Cystamine also has inhibition activity for caspase-3 with an IC50 value of 23.6 μM. Cystamine can be used for the research of severals diseases including Huntington's disease (HD)[2][3][4].
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]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[2]. Mathieu Lesort, et al. Cystamine inhibits caspase activity. Implications for the treatment of polyglutamine disorders. J Biol Chem. 2003 Feb 7;278(6):3825-30.

[3]. Alpaslan Dedeoglu, et al. Therapeutic effects of cystamine in a murine model of Huntington's disease. J Neurosci. 2002 Oct 1522(20):8942-50.

[4]. Thomas M Jeitner, et al. Cystamine and cysteamine as inhibitors of transglutaminase activity in vivo. Biosci Rep. 2018 Sep 538(5):BSR20180691.

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