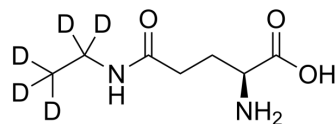


L-Theanine-d₅

Cat. No.:	HY-15121S		
CAS No.:	1217451-85-8		
Molecular Formula:	C ₇ H ₉ D ₅ N ₂ O ₃		
Molecular Weight:	179.23		
Target:	Apoptosis; Endogenous Metabolite		
Pathway:	Apoptosis; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	L-Theanine-d ₅ is the deuterium labeled L-Theanine. L-Theanine (L-Glutamic Acid γ-ethyl amide) is a non-protein amino acid contained in green tea leaves, which blocks the binding of L-glutamic acid to glutamate receptors in the brain, and with neuroprotective and anti-oxidative activities. L-Theanine causes anti-stress effects via the inhibition of cortical neuron excitation by oral intake[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]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Vuong QV, et al. L-Theanine: properties, synthesis and isolation from tea. *J Sci Food Agric.* 2011 Aug 30;91(11):1931-9.
- [3]. Kimura K, et al. L-Theanine reduces psychological and physiological stress responses. *Biol Psychol.* 2007 Jan;74(1):39-45.
- [4]. Takeshima M, et al. L-Theanine protects against excess dopamine-induced neurotoxicity in the presence of astrocytes. *J Clin Biochem Nutr.* 2016 Sep;59(2):93-99.

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

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