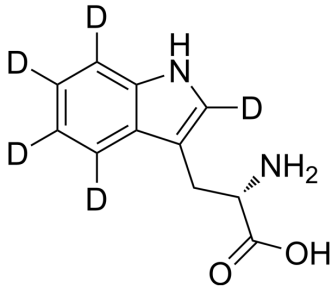
L-Tryptophan-d_5

Cat. No.:	HY-N0623S
CAS No.:	62595-11-3
Molecular Formula:	$C_{11}H_7D_5N_2O_2$
Molecular Weight:	209.26
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 33.33 mg/mL (159.28 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.7787 mL	23.8937 mL	47.7874 mL
5 mM	0.9557 mL	4.7787 mL	9.5575 mL
10 mM	0.4779 mL	2.3894 mL	4.7787 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

L-Tryptophan-d_5 is the deuterium labeled L-Tryptophan. L-Tryptophan (Tryptophan) is an essential amino acid that is the precursor of serotonin, melatonin, and vitamin B3[1].

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]. Slominski A, et al. Conversion of L-tryptophan to serotonin and melatonin in human melanoma cells. FEBS Lett. 2002 Jan 30;511(1-3):102-6.

[2]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

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