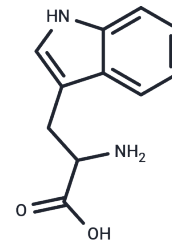


DL-Tryptophan

Chemical Properties

CAS No. :	54-12-6
Formula:	C ₁₁ H ₁₂ N ₂ O ₂
Molecular Weight:	204.23
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	DL-Tryptophan ((±)-Tryptophan) containing dipeptides are interesting ingredients for functional foods as a natural prevention for hypertension with reduced side effects due to its selective inhibition of the C-domain. Low thalamic Tryptophan uptake appears to be a strong, independent predictor of long survival in patients with previous glioma treatment.
Targets(IC50)	Endogenous Metabolite,Serotonin Transporter
In vitro	Tryptophan is an essential amino acid, required for the production of serotonin. Tryptophan represents a key element for brain functioning, because of its role as a precursor for production of neurotransmitter serotonin[2].
In vivo	In clinical conditions, which involve chronic immune system activation or under cytokine therapy, lower tryptophan levels because of high catabolism of tryptophan as indicated by the kynurenine to tryptophan ratio are common and often associate with depressive mood[2].

Solubility Information

Solubility	DMSO: 3.12 mg/mL (15.28 mM),Sonication is recommended. H ₂ O: Insoluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.31 mg/mL (1.52 mM),Solution. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8964 mL	24.4822 mL	48.9644 mL
5 mM	0.9793 mL	4.8964 mL	9.7929 mL
10 mM	0.4896 mL	2.4482 mL	4.8964 mL
50 mM	0.0979 mL	0.4896 mL	0.9793 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Di Pizio A, Nicoli A. In Silico Molecular Study of Tryptophan Bitterness. *Molecules*. 2020 Oct 11;25(20):4623.
Strasser B, Gostner JM, Fuchs D. Mood, food, and cognition: role of tryptophan and serotonin. *Curr Opin Clin Nutr Metab Care*. 2016 Jan;19(1):55-61.

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