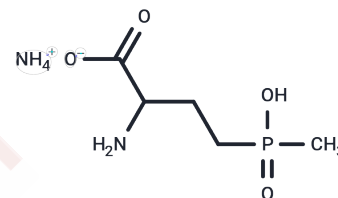


Glufosinate ammonium

Chemical Properties

CAS No. :	77182-82-2
Formula:	C ₅ H ₁₅ N ₂ O ₄ P
Molecular Weight:	198.16
Storage:	Keep away from direct sunlight, Store under nitrogen Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Glufosinate ammonium is a phosphinic acid analogue of glutamic acid and is an herbicide. Glufosinate ammonium is converted by plant cells into PT (L-phosphinothricin). Glufosinate ammonium has neurotoxic activity.
Targets(IC50)	Others
In vitro	Glufosinate ammonium impairs ependymal cell capability to synthesize cilia. Glufosinate ammonium (1-100 μM; 12DIV) obviously reduces Celsr2 gene expression at 100 μM. Glufosinate ammonium (1-100 μM; 12DIV) disrupts cell-cell adhesion in differentiated V-SVZ neural stem cells (NSCs) [2].
In vivo	Glufosinate ammonium (10-250 mg/kg; gavage; daily; on days 6-15 of gestation) exhibits maternal toxicity at doses of 50 or 250 mg/kg in Wistar rats. In both male and female rats, the elimination of Glufosinate ammonium (oral intubation) from the blood has a half-life of less than 4 hours [3].

Solubility Information

Solubility	H ₂ O: 262.5 mg/mL (1324.69 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.0464 mL	25.2321 mL	50.4643 mL
5 mM	1.0093 mL	5.0464 mL	10.0929 mL
10 mM	0.5046 mL	2.5232 mL	5.0464 mL
50 mM	0.1009 mL	0.5046 mL	1.0093 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

Feat-Vetel J, et al. Multiple effects of the herbicide glufosinate-ammonium and its main metabolite on neural stem cells from the subventricular zone of newborn mice. *Neurotoxicology*. 2018 Dec;69:152-163.

Ebert E, et al. Summary of safety evaluation toxicity studies of glufosinate ammonium. *Food Chem Toxicol*. 1990 May;28(5):339-49.

Áy Z, et al. The effect of high concentrations of glufosinate ammonium on the yield components of transgenic spring wheat (*Triticum aestivum* L.) constitutively expressing the bar gene. *ScientificWorldJournal*. 2012;2012: 657945.

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