Glyphosate

Cat. No.: HY-B0863

CAS No.: 1071-83-6

Molecular Formula: $C_3H_8NO_5P$

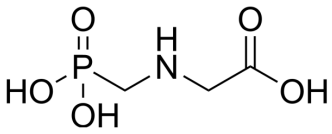
Molecular Weight: 169.07

Target: Apoptosis; Autophagy

Pathway: Apoptosis; Autophagy

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 13.89 mg/mL (82.16 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	5.9147 mL	29.5735 mL	59.1471 mL
	5 mM	1.1829 mL	5.9147 mL	11.8294 mL
	10 mM	0.5915 mL	2.9574 mL	5.9147 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 6.67 mg/mL (39.45 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Glyphosate is an herbicidal derivative of the amino acid glycine. Glyphosate targets and blocks a plant metabolic pathway not found in animals, the shikimate pathway, required for the synthesis of aromatic amino acids in plants[1].

In Vitro

Glyphosate is a high-efficiency, low-toxicity, broad-spectrum herbicide. The residues of glyphosate-based herbicides are frequent pollutants in the environment. Glyphosate exposure could interfere with mouse oocyte maturation by generating oxidative stress and early apoptosis.Glyphosate induces early apoptosis and autophagy in mouse oocytes[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Greim H, et al. Evaluation of carcinogenic potential of the herbicide glyphosate, drawing on tumor incidence data from fourteen chronic/carcinogenicity rodent studies. Crit Rev Toxicol. 2015;45(3):185-208.

[2]. Zhang JW, et al The toxic effects and possible mechanisms of glyphosate on mouse oocytes. Chemosphere. 2019 Dec;237:124435.

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