P679

DL-Phosphinothricin, Monoammonium Salt

Synonym: PPT; 2-Amino-4-(hydroxymethylphosphinyl)butanoic Acid, Monoammonium Salt; Glufosinate-ammonium

CAS: 77182-82-2

Formula: C_{15}H_{15}N_{2}O_{4}P

Molecular Wt: 198.19

Properties

Form: Powder

Appearance: White to Yellow Crystalline

Application: Molecular Biology

Solubility: Water

Storage Temp: Room Temperature

Typical Working Concentration: 0.5 to 400 µg/mL – See Application Notes Below

Storage Temp of Stock Solution: 2 – 6 °C; See Product No. G523

Other Notes: For Research Use Only

Application Notes

DL-phosphinothricin is also known as glufosinate-ammonium (GLA) and is an active ingredient in Basta®. It functions by inhibiting the glutamine synthase in the chloroplast from synthesizing glutamine to glutamate, which causes ammonia accumulation, thus results in plant death.\(^2\),\(^3\),\(^4\)

Typical working concentration of GLA varies by applications. It has been reported that treatment of GLA at 0.5 µg/mL stimulates the somatic embryo formation of \textit{Vitis} interspecific hybrid\(^2\), while GLA concentrations range from 50 µg/mL to 400 µg/mL are used in the transformation of \textit{Magnaporthe grisea}\(^3\).

\textit{PhytoTechnology Laboratories®} also carries DL-Phosphinothricin solution at 1 mg/mL, Product No. G523.

Please Note: It is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

1. Merck 13, 7425