

L-Alanyl-L-Glutamine Solution (200mM)

Cat #: A-CSH763

Size: 500mL

Storage: 2-8°C, protect from light, shelf life of 12 months.

Product Description

L-Alanyl-L-glutamine (Ala-Glu), also known as alanylglutamine or dipeptide Ala-Gln, is an advanced cell culture supplement that can directly replace L-glutamine in cell culture media. L-glutamine is an essential nutrient in cell culture but is unstable in solution, spontaneously degrading to ammonia and pyroglutamic acid, with ammonia being harmful to cells. In contrast, L-alanyl-L-glutamine is highly stable in aqueous solutions and does not undergo spontaneous degradation. The mechanism of cellular utilization involves the gradual release of a peptidase by cells during culture, which hydrolyzes L-alanyl-L-glutamine into L-alanine and L-glutamine, and then cells absorb and utilize these two hydrolysis products. The utilization of L-alanyl-L-glutamine by cells is similar to the fed-batch culture strategy, continuously adding low concentrations of L-glutamine to the culture medium, thereby improving the utilization efficiency of L-glutamine without generating excess ammonia, which is more favorable for cell growth.

L-alanyl-L-glutamine can replace equimolar L-glutamine and is suitable for all cell types with minimal adaptation required. It can extend the culture time of cells, reduce the number of passages, saving both time and money.

Compared to cells cultured in media supplemented with L-glutamine, cells cultured with L-alanyl-L-glutamine exhibit slower decline in activity. The slight extension of the lag phase is due to the time required for the release of peptidase and digestion of the dipeptide.

Usage

This product is a 200 mM concentrated solution. Dilute as needed before use. The optimal final concentration of glutamine in the medium depends on the cell type and medium composition, generally ranging from 2-8 mM.

Notes

1. Handle aseptically to avoid contamination.
2. Avoid repeated freeze-thaw cycles to prevent loss of activity.
3. For your safety and health, please wear lab attire and disposable gloves during operation.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.