

L-Asparaginase

Product Data Sheet / Certificate of Analysis

Cat. No.: RP1792870500

RP1792872500

RP17928710000

500 IU

2500 IU

10,000 IU

Introduction:

L-Asparaginase is an enzyme that depletes L-Asparagine "an important nutrient for cancer cells" resulting in cancer/tumor cell starvation. L-asparaginase is an anti-tumor agent derived from E.coli., which can inhibit the growth of malignant cells. It is used mainly for the induction of remission in acute lymphoblastic leukaemia. Because of the lymph node origin of malignant B cells in Multiple Myeloma, L-Asparagine is an essential amino acid for their cell metabolism, and, consequently, L-Asparaginase may be of value in managing the disease. The rationale behind asparaginase is that it takes advantage of the fact that ALL cells are unable to synthesize the non-essential amino acid asparagine whereas normal cells are able to make their own asparagine. These leukemic cells depend on circulating asparagine. Asparaginase however catalyzes the conversion of L-asparagine to aspartic acid and ammonia. This deprives the leukemic cell of circulating asparagine.

Description:

L-Asparaginase was purified from E.Coli ASI.357.

Source:

Escherichia Coli

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

The enzyme was lyophilized with no additives.

Purity:

Greater than 96.0% as determined by:SDS-PAGE.

Solubility:

It is recommended to reconstitute the lyophilized L-Asparaginase in 18M Ω m water at 1 mg/ml.

Stability:

Lyophilized L-Asparaginase although stable at room temperature for 3 weeks, should be stored desiccated at or below -20°C. Upon reconstitution L-Asparaginase should be stored at 4°C between 2-7 days and for future use at or below -20°C

Unit Definition:

One unit of enzyme catalyzes hydrolyzation of 10 nanomoles of dUTP to dUMP in one hour at 85 Centigrade.

Activity:

One IU of L- Asparaginase is defined as that amount of enzyme required to generate 1 μ mol of ammonia per minute at pH 7.3 and 37°C.

Specific Activity:

269 IU/mg (varies slightly between lots)

Usage:

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