



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

L-Asparaginase

Catalog No.

228-11009

Source

Escherichia Coli

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 produced from E.Coli containing 303 amino acids and having a molecular mass of 31731 Dalton.

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 (a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

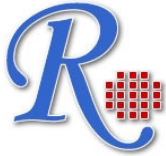
Stability

Two years when stored at -20°C, 2 weeks at 4°C.

Unit Definition

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

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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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

225 IU/mg.

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