

Product Data Sheet

Cat # RP-1466

L-Asparaginase

Size: 500 IU

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: Escherichia Coli L-Asparaginase produced from E.Coli containing 303 amino acids and having a molecular mass of 31731 Dalton. The enzyme was lyophilized with no additives.

Applications and Suggested Dilutions: Greater than 96.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. One unit of enzyme catalyzes hydrolyzation of 10 nanomoles of dUTP to dUMP in one hour at 85 Centigrade. One IU of L- Asparaginase is defined as that amount of enzyme required to generate 1 µmol of ammonia per minute at pH 7.3 and 37°C. Specific Activity: 250,000 IU/mg. Users must optimize the appropriate concentration and conditions for each assay.

Storage and Stability: Two years when stored at -20°C, 2 weeks at 4°C. If supplied in powder then reconstitute it in 100 µl water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

Usage:

This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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