

E. coli L-Asparaginase - Purified

Catalog No.: AR10140PU-S

Quantity: 0.5 kIU

Background: 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.

Uniprot ID: [P37595](#)

NCBI: [AP_001459.1](#)

GeneID: [945456](#)

Species: *E. coli*

Source: *E. coli*

Format: **State:** Sterile Filtered White lyophilized (freeze-dried) powder enzyme without additives.
Purity: >96.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Description: L-Asparaginase produced from *E.coli* containing 303 amino acids and having a Molecular Mass of 31731 Dalton.
Biological Activity: 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.

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

Specific Activity: 225 IU/mg

Molecular weight: 31731 Da

Storage: Store the antigen for 2 weeks at 2-8°C or at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: One year from despatch.