

RECOMBINANT GLUTAMINASE FREE L-ASPARAGINASE FROM MARINE ACTINOBACTERIANOCARDIOPSIS ALBA: A PROMISING THERAPEUTIC AGENT FOR LEUKAEMIA CHEMOTHERAPY

BRIEF DESCRIPTION:

The present invention relates to the construction and optimization of biosynthetic genes from the *Nocardiosis alba* L-asparaginase gene, the method for cloning same and expression thereof in *Escherichia coli*. The purpose of the production of said enzyme is for producing high levels of a recombinant novel L-asparaginase that can be used in L-asparaginase-based pharmaceutical compositions for treating cancer, tumours and diseases involving cell proliferation, as well as for other medical applications.

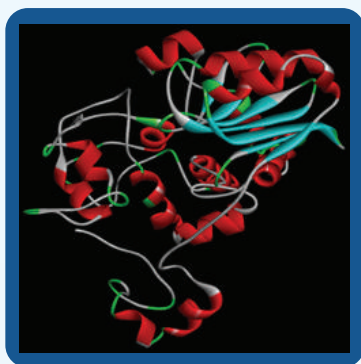
Application:

The development of this recombinant enzyme aim for its use in pharmaceutical compositions intended for use in medical applications, such as in the treatment of cancer, tumors and diseases in which cell proliferation is involved, providing an alternative to existing drugs.

The products developed in this invention represent a new way to treat cancer, tumors and diseases in which cell proliferation is involved. In addition, the developed techniques provide a high production output and productivity, which is reflected in lower cost of the final product.

SALIENT FEATURES:

- *N. alba* NIOT-VKKMA08 was isolated from the marine sediments of Phoenix Bay in Port Blair, Andaman and Nicobar Islands (A & N), India and was grown aerobically in starch casein agar (SCA) supplemented with 25 µg/mL nalidixic acid (Hi-Media, Mumbai, India) to inhibit the fast-growing Gram-negative bacteria.



3D model prediction of ansA protein from *Nocardiosis alba* NIOT-VKKMA08.

Scale of Development: Technology demonstrated and commercialized