

USE OF BCL7A AS MOLECULAR TARGET FOR DLBCL DRUG SCREENING & DEVELOPMENT

Technology for Licensing

Keywords:

BCL7A, Diffuse large B-cell lymphoma, DLBCL, ACB, GCB, diagnosis, prognosis, drug screening, kit, device.

Description:

Diffuse large B-cell lymphoma is the most common type of Non-Hodgkin's Lymphomas (NHL). With an annual incidence of more than 100,000 cases worldwide, it is noted for its high aggressiveness and heterogeneity, both clinical and genetic, which limits the existence of effective treatment. Although more than half of these patients can achieve long-term remission, it remains a challenging clinical problem with approximately one-third of patients not being cured by standard immunochemotherapy regimens.

Among its molecular subtypes predominate the germinal center B cells (GCB) and the activated B cell variety (ACB), both characterized by their different gene expression profiles.

A Spanish research group has demonstrated for the first time the tumor suppressing role of the BCL7A gene and the functional impact that some of its genetic variations have on the development of DLBCL.

Genetic mutations mapped in exon 1 and intron 1 splicing sites of the BCL7A gene have been identified mostly in DLBCL patients with the GCB subtype. Such mutations cause the loss of the amino-terminal domain of BCL7A, resulting in a truncated protein.

The present technology provides the use of BCL7A and its expression products detection to offer a novel tool for the treatment of DLBCL in terms of drug detection, prognosis, diagnosis and treatment.

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Advantages and Benefits

» Diagnosis of the disease based on BCL7A mutations

These mutations are more frequent in diffuse large B-cell lymphomas (DLBCL) and concretely in the specific germinal center subtype (GCB).

» Analysis of tumor cells easier

The mutations are in a specific region of the BCL7A gene (first exon and splicing donor of intron 1) and occur exclusively somatically in tumors.

» *In vitro* and *in vivo* evidence

Restoration of BCL7A correlates with a tumor suppressor effect.

» BCL7A expression levels are used to classify patients according to their prognosis

» New tool for the development of new epigenetic drugs against cancer that targets histone marks with greater precision than previous generations

» Simple method and no specific equipment needed

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Contact:

Oficina de Transferencia de Resultados de Investigación
(OTRI) - Universidad de Granada