



## **Treatment of Autoimmune Diseases by Modulating Bregs**

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### **Principal investigator**

**Idit Shachar**

Faculty of Biology  
Department of Department of Immunology

## **Summary**

Chronic lymphocytic leukemia (CLL), a malignant disease characterized by the accumulation of B lymphocytes in the blood, lymphoid organs, and bone marrow, is the second most common type of leukemia in adults, accounting for about 7,000 new cases of leukemia each year. Presently, there is no cure for CLL, and the overall goal of leukemia treatment is to bring about a remission. Therefore, identifying new proteins that may serve as a target for inducing cell death in the malignant cells is highly desirable. The present technology identifies a new regulator protein that is essential for the survival of CLL cells.

## **Applications**

- Diagnosis of CLL

## **Advantages**

- Very specific to malignant B cells • Diagnosis, and therefore treatment, can be made at early stages of the disease

## **Technology's Essence**

B cells taken from CLL patients have a high level of the protein CD84. Stimulation of CD84 upregulates the survival of B-CLL. However, inhibition of CD84 activity with a blocking antibody downregulates the expression of another protein which controls B-CLL survival, thus inducing cell death. Therefore, the present invention reveals CD84 as a regulator of B-CLL survival

## **Patent Status**

USA Granted: 10,611,839 USA Granted: 9,109,029 USA Granted: 10,329,347 USA Granted: 10,828,318 USA  
Granted: 8,686,121 USA Granted: 10,066,014

