



Intellectual Property Office

Immunogenic Peptides – CD19/20

Technology Reference

R037

Keywords

Therapeutics
Immunology

Contact

Lauren Rhone
Technology Transfer
1725 West Harrison, #439
Chicago, IL 60612
P: 312.942.5150
F: 312.942.2874
E: Lauren_rhone@rush.edu

Inventor

Joo-eun Bae, Ph.D.

Patent Status

Published US Patent
Application 2005-0048071

Cross Reference

This invention is related
to R036

AREAS OF APPLICATION

- Cellular immunotherapy for B-cell malignancies
- Potential component of vaccines against B-cell malignancies

ADVANTAGES

- Specifically targets malignant B-cells
- Multiple peptides are available
- HLA-matched T-cells may be sensitized in-vitro or ex-vivo using these peptides thereby minimizing issues related to in-vivo peptide degradation and the need to rely on potentially damaged patient T-cells and antigen presenting cells

THE TECHNOLOGY

This invention comprises families of peptides derived from fragments of CD19 and CD20 antigens that are strongly associated with B-cell malignancies and are specifically bound by the HLA-A2.1 complex that is expressed by malignant B-cells in approximately 50% of the population. These peptides are capable of stimulating a cytotoxic T-lymphocyte (CTL) response against acute myeloid leukemia (AML) cells. The use of dendritic cells and T2 cells as antigen presenting cells during the activation of the CTL's is described as are cytokine treatments (GM-CSF, INF- γ , TNF- α) to stimulate HLA-A2.1 expression by AML cells. HLA-compatible anti-AML T-cell clones prepared according to this method are also contemplated.

Rush Medical Center University
www.rush.edu/research
Intellectual Property Office