Monoclonal Antibodies Against Leukocyte Adhesion Receptor Beta-Chain, Methods of Producing These Antibodies and Use Therefore

Published date: Feb. 24, 2017

Technology description

Monoclonal Antibody for Treatment and Diagnosis of AIDSJHU REF: Invention Novelty
This technology is a novel monoclonal antibody specific against an epitope that suppresses immune response mediated diseases such as AIDS.

Value Proposition
Acquired immunodeficiency syndrome (AIDS) is a fatal, incurable disease characterized by profound immunosuppression, opportunistic infection and neuropathies. Current therapies in controlling the AIDS and other immune response mediated diseases are limited in their effectiveness and often times have severe contraindications and side effects. This technology is a safe and effective monoclonal antibody that allows the immune system to fight against immune response mediated diseases by suppressing the depletion of T cells associated with disease mediated cell fusion.

Technical Details
The depletion of $CD4^{+}$-T cells contributes significantly to the immunosuppression associated with AIDS and is achieved through multi-nucleated cell formation resulting from disease induced cell fusion. Leukocyte adhesions receptor (LFA-1) has been demonstrated to increase virus-cell interaction, enhance virus infectivity, and extend the host cell range of the virus. Johns Hopkins researchers have developed an anti-LFA-1 monoclonal antibody which inhibits LFA-1 and prevents the cell fusion that is induced by HIV and other immune response mediated diseases which causes the depletion of T cells needed to fight off infection.
Publication(s)/Associated Cases: AIDS Res Hum Retroviruses. 1998 Oct;14 Suppl 3:S247-54.

Advantages

Safe and effective
Can be used alongside other therapeutics

Institution

Johns Hopkins University

Inventors

James Hildreth
Outside