Monoclonal Antibody 90.12 Specific to a Novel B Cell Surface Antigen Upregulated on Both Activated and Apoptotic Lymphocytes

Technology Summary

The FDA is pleased to announce as available for licensing a murine monoclonal antibody that specifically binds to Fragment C of tetanus toxin. Tetanus toxin is one of the most potent neurotoxins known. It is a complex molecule, composed of a linked heavy chain and light chain, each having different domains serving different functions. One domain of the heavy chain, known as "Fragment C," is known to bind the toxin to neurons. Fragment C is the focus of much research, including: analysis of the subtle differences between neuronal uptake of tetanus toxin and the related botulinum toxin, the design of compounds that block the uptake of tetanus toxin, and design of drugs that target the same cellular mechanism to enhance uptake.

Potential Commercial Applications

- Cell-based imaging agents
- New drug development, including antitoxins

Competitive Advantages

- Toxin specific-site antibodies

Development Stage:

Inventors: Marjorie Shapiro, Sean Fitzsimmons

Publications:

- Fitzsimmons, SP. et. al. Inhibition of tetanus toxin fragment C binding to ganglioside G(T1b) by monoclonal antibodies recognizing different fragment C epitopes. Vaccine 2000 Aug 15;19(1):114-121. PMID: 10924793

Intellectual Property:

- Research Material- patent protection is not being pursued for this technology

Product Area: research material, antibodies, S100, surface, antigen, lymphocyte, expression,

FDA Reference No: E-2004-019

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