Mouse Hybridoma BC25B11.2C Secreting Monoclonal Antibodies to Bovine Coronavirus

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Technology description

The Need

Bovine Coronavirus (BCV) - DB2 strain causes high death losses in young calves. Monoclonal antibodies produced in mice injected with hybridoma cells or concentrated hybridoma supernatant produced against bovine coronavirus- DB2 strain can be used to improve diagnostic tests, for possible therapy in nursing calves, and to facilitate the production of effective vaccines. The use of monoclonal antibodies that react with various viral proteins or distinguish viral strains will provide a more accurate diagnosis of enteric viral infections, differentiate calf strains of bovine coronavirus from BCV isolated from cases of winter dysentery in adult calves, and may discriminate between vaccinated or naturally infected cattle.
Monoclonal antibody reagents produced in mice are used to detect or serotype viruses and the recombinant baculovirus expressed viral proteins or DNA plasmids and are used to prepare viral protein-specific monoclonal antibodies for diagnosis or viral strain typing or differentiation. Such reagents are distributed to researchers worldwide.

The Technology

Researchers at The Ohio State University, led by Dr. Linda Saif, created BC25B11.2C, a cloned mouse hybridoma cell line. The hybridoma secretes antibodies reactive with bovine coronavirus. The antibodies react with bovine coranavirus inex vivodetection assays and neutralize the infectivity of bovine coronavirus in virus neutralization assays
A cloned mouse hybridoma cell line with potential use in diagnosis and treatment of bovine coronavirus (DB2 strain).

Application area

Veterinary Medicine
Diagnostics
Vaccines

Advantages

Resulting antibodies are reactive with bovine coronavirus in ELISA and immunofluorescence assays
Resulting antibodies neutralize the infectivity of bovine coronavirus in virus neutralization assays

Institution

Ventech Solutions

Inventors

Linda Saif