Mouse hybridoma 25C9.3C Secreting Monoclonal Antibodies to Porcine Coronavirus

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Technology description

The Need

Transmissible gastroenteritis coronavirus (TGEV) is a porcine virus that has a mortality rate close to 100% in young pigs. Monoclonal antibodies produced in mice injected with hybridoma cells or concentrated hybridoma supernatant produced against porcine coronavirus-TGEV can be used to improve diagnostic tests, for possible therapy in nursing pigs 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 and differentiate TGEV strains of porcine coronavirus from other unrelated porcine coronaviruses (PEDV, HEV).

The Technology

Researchers at The Ohio State University led by Linda Saif have created a cloned mouse hybridoma cell line, 25C9.3C, that secretes monoclonal antibodies (MAbs) that are reactive with TGEV coronavirus. The antibodies react inex vivodetection assays and neutralize the infectivity of TGEV in virus neutralization assays. Monoclonal antibody reagents produced in mice are used to detect or serotype viruses; the recombinant baculovirus expressed viral proteins or DNA plasmids are then for preparation of viral protein-specific monoclonal antibodies for diagnosis or viral strain typing or differentiation.

Application area

Veterinary Medicine
Diagnostics
Research Tools

Advantages

More accurate diagnosis of enteric viral infections
Differentiation of TGEV strains of porcine coronavirus from other unrelated porcine coronaviruses (PEDV, HEV)

A cloned mouse hybridoma cell line

Institution

Ventech Solutions

Inventors

Linda Saif