Protoplast fusion, also known as somatic fusion, is a genetic modification technique used in plants where protoplasts from two different plant species are fused together to create a hybrid plant with combined characteristics [T4]. Each monoclonal antibody is designed to bind to a single antigen, making them highly specific in their targeting capabilities. Protoplast fusion has been utilized to combine genes from different organisms to create strains with desired properties, showcasing its importance in biotechnology. One application of protoplast fusion is in strain improvement for genetic recombination and developing hybrid strains in filamentous fungi [T5]. This technique allows for the synthesis of novel .gene combinations and is essential for genetic manipulation in plants