Antibodies are a popular tool used in plant cell biology research. They can be either custom made or purchased from a commercial supplier. In either case their production is a complex process, consisting of three very important components which has to be carefully considered. These are: Antigen-Animal-Testing. Which source of antigen is most optimal for your project: peptide, recombinant protein or a native protein isolated from tissue? Which animal species to choose? Are certain species making better antibodies compare to others? Do I have any controls to validate produced antibody? What controls should be used? What to do if my antibody is not giving any signal in a western blot?