

Apr 20th, 11:00 AM - 2:00 PM

Validation of Humanized Mouse Antibodies

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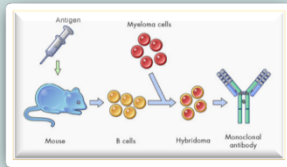
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Validation of Humanized Mouse Antibodies

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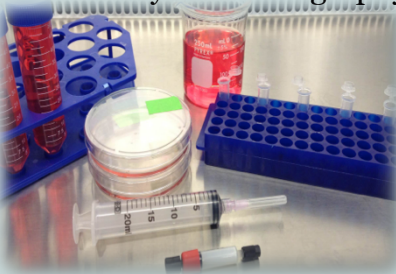
Introduction:

- Mouse monoclonal antibodies can be “humanized,” or cloned until the heavy and light chains of the antibody are no longer recognized as “self” by human cells.
- Assays ensure the antibodies are still functional and retain specific binding to human cell targets.
- Successful antibodies may go on to clinical trials for antibody therapies (ex. Lucentis® for macular edema)



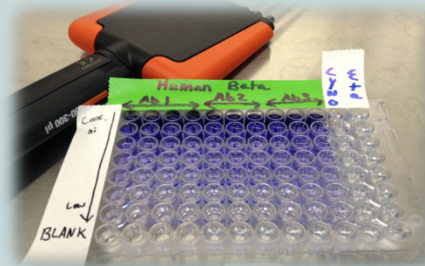
Methods:

- 1) Purification of mouse IgG1
 - harvest cell supernatant
 - clarify
 - affinity chromatography



2) ELISA for antibody binding

- specific binding of antibody to target protein, correct conformation, structure
- protein tested is human beta
- cross-reactivity tested with cynomolgus beta protein
- negative control is human eta protein



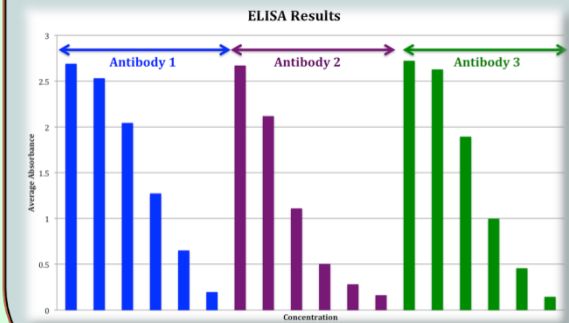
3) Western blot for size determination

- shows specific binding of denatured protein to antibody
- same experimental proteins as ELISA



Results:

- Lead monoclonal antibody retained specificity in binding and functionality
- Native and denatured proteins are recognized by lead antibody
- Target and antibody matched



Future Research:

- Testing the antibody products for safety in animal models
- Testing the antibody products for use in humans