

ELISA Model Sandwich Assay Cancer Biology Kit

Parts List

10cm petri dishes

Velcro sticky back white circles, 5/8" diam, 15 circles/pack

Velcro think clear fasteners, 3/8" diam, 56 circles/pack

Wooden spools – Craft wood 3/4" x 5/8" spools, 10pcs #9110-61

Wooden spools - Craft wood 1/2" x 5/8" spools, 40pcs #911-52

Wooden stars – Loew Cornell Simply Art, 130 stars in var sizes, #1021196

Furniture button – Craft wood 100pcs, 3/8" diam, #9119-20

Adhesive backed magnets, 12pc, round, 0.5" diam

Round metal washer, 5/8" diam

Grafix Cling Vinyl, 6 colored sheets, 9" x 12"

Super glue

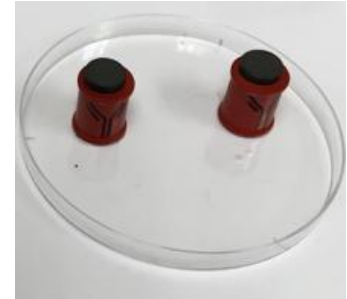
Spray paint – red, yellow, light purple

All supplies were purchased at JoAnn Crafts except the metal washers (Hardware Store)

Model Assembly

1° Antibody

1. Spray paint the appropriate number of wooden spools (either larger or smaller size) red.
2. Glue a circular magnet to one end of the spool.
3. Draw the stick diagram of the Ab structure on the side of the spool – variable regions at the end where the magnet is.
4. Super glue 2 of the spools by their non-magnet end to one side of a petri dish (which represents a well in a 96w plate).



Blocker

1. Cut strips of cling vinyl (any color) that are 1" wide.
2. Cut these strips into ½" wide pieces.



Pathogen

1. Spray paint wooden stars yellow on both sides.
2. On one side stick a white 5/8" diam circle of the fuzzy side of Velcro.
3. On the other side stick a circular metal washer.



2° Antibody

1. Spray paint the appropriate number of wooden spools (large or small size) light purple.
2. Stick white 5/8" diam circles of the spiky side of Velcro to one end of the spool.
3. Glue a wooden furniture button to the other end of the spool.
4. Draw the stick diagram of the Ab structure on the side of the spool – variable regions at the end where the Velcro is.
5. Draw a scissors on the top of the furniture button (to represent HRP).

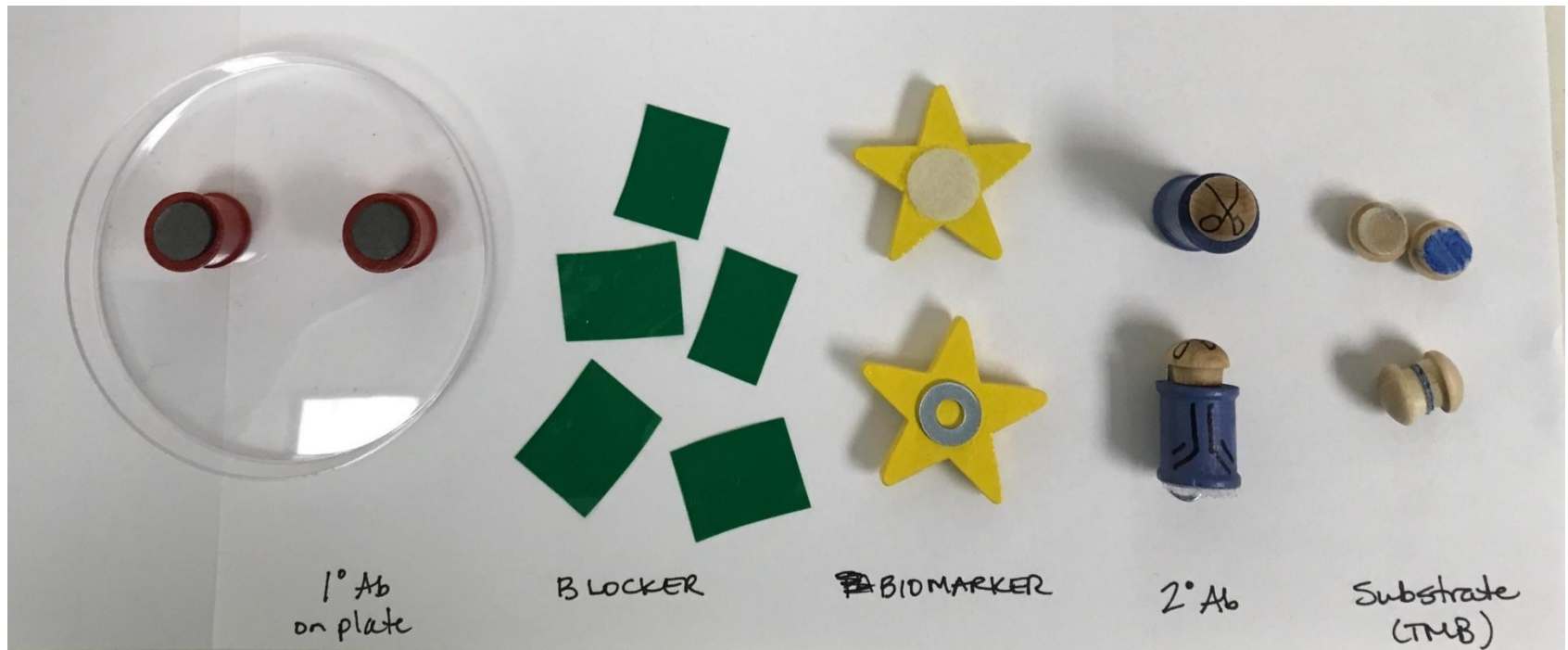


Substrate (TMB)

1. Stick one of the clear Velcro fasteners (spiky side) to the flat side of a furniture button.
2. Stick one of the clear Velcro fasteners (fuzzy side) to the flat side of a furniture button.
3. Color the fuzzy Velcro blue with a sharpie.
4. Stick the two furniture buttons together to represent uncleaved substrate.



Assembled ELISA Components



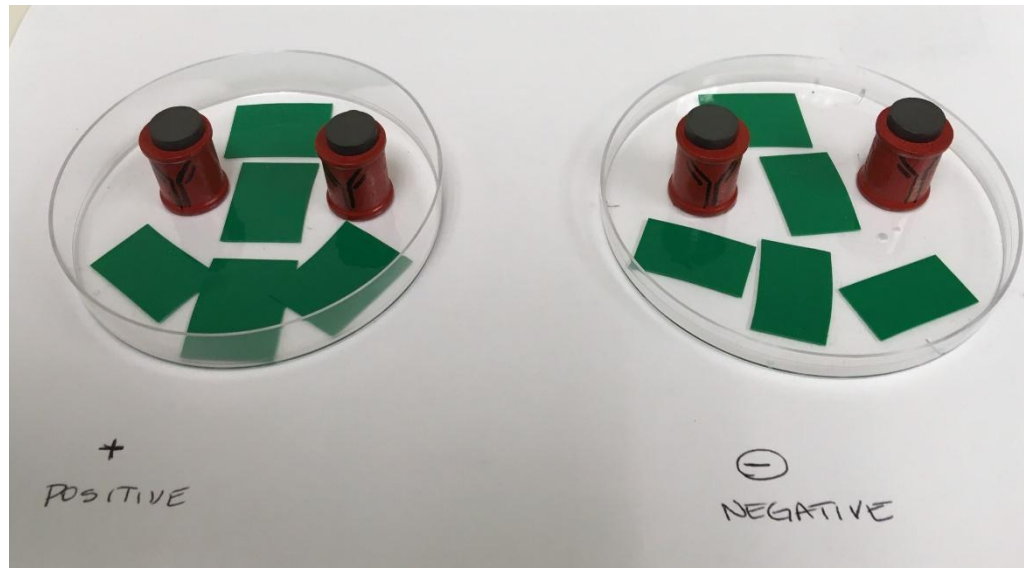
Coating with 1° Ab

Blocking

Coat plate with 1° Ab



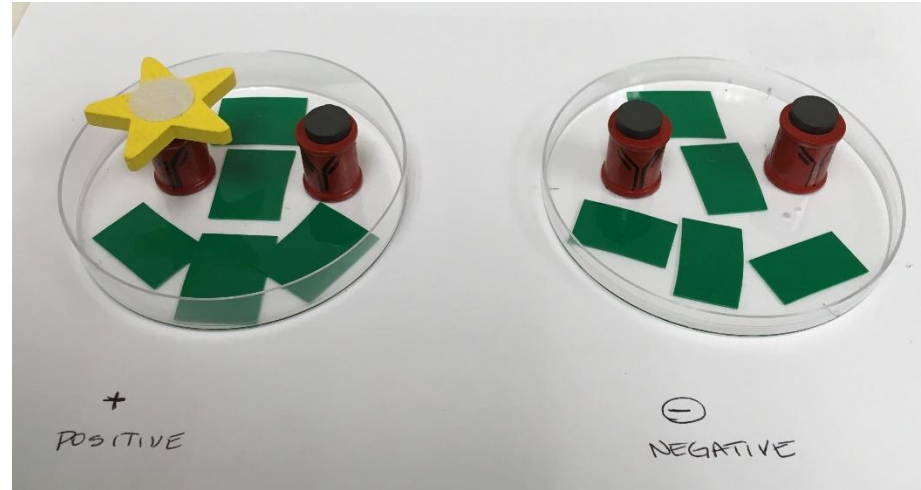
Block



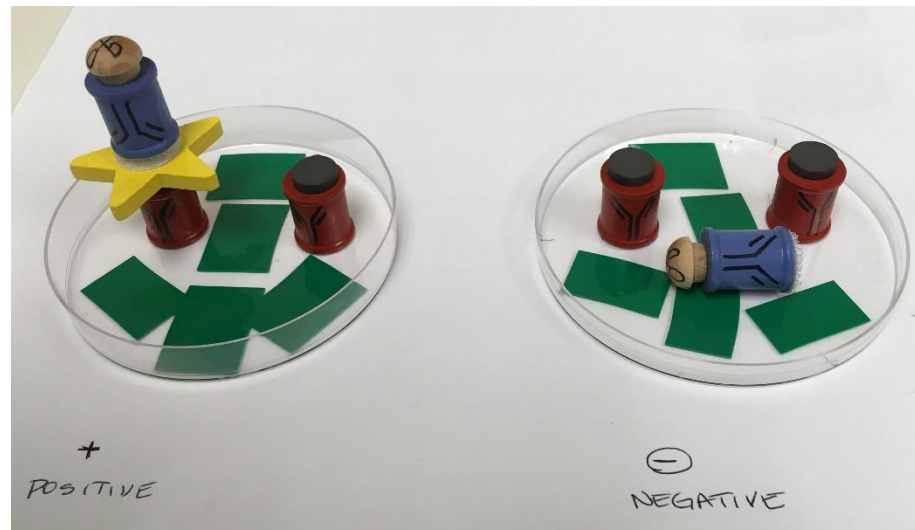
Addition of experimental samples (+/- Biomarker)

Addition of 2° Ab

Add samples +/- Biomarker



Add 2° Ab conjugated to HRP



Addition of Substrate (TMB)

Add substrate

