The antibodies are chosen according to the label on the slide. The scientist works out the correct concentration of the antibody required.

1. These slides have a 4mm section from a paraffin-embedded specimen, which can be seen by looking closely at the contents of the red box. A green box has been drawn around the label, which informs the laboratory scientist about:
   1. The patient’s accession number (hidden)
   2. B1 + S100: The antigens for which the test will search.
   3. MEL: The type of sample.

2. The antigens in the sample must be made available for antibody binding. This is done by using an antigen retrieval agent, or “reagent”. The reagent used depends on the type of sample. Examples of reagents include:
   - Proteinase K
   - Pepsin
   - Microwave pressure chamber
   - Protease type VIII

3. The DAB enhancer is used to intensify the DAB chromagen, which is the substrate that will produce a positive immunoreaction product after exposure to the necessary enzyme. When the DAB chromagen is exposed to immunoperoxidase, it will react to produce a brown-black product.

4. The antibodies are chosen according to the label on the slide. The scientist works out the correct concentration of the antibody required.

5. The slides and the antibodies are then placed into the autostainer, which follows a computer program to administer the correct antibody solution to the appropriate slide, and to apply the appropriate counterstain.
This slide is a diffuse large cell lymphoma immunoreacted with CD20. CD20 is a B cell marker. You can see that it marks up the cell membrane. This is where the antigen sits and the antibody binds to it.

CD refers to cluster of differentiation, and is used for the investigation of surface molecules as markers of cells. Others include CD3, which is a T cell marker.

(Please note: the sample used to explain the procedure, and the tissue sample shown above as the finished product, are different.)