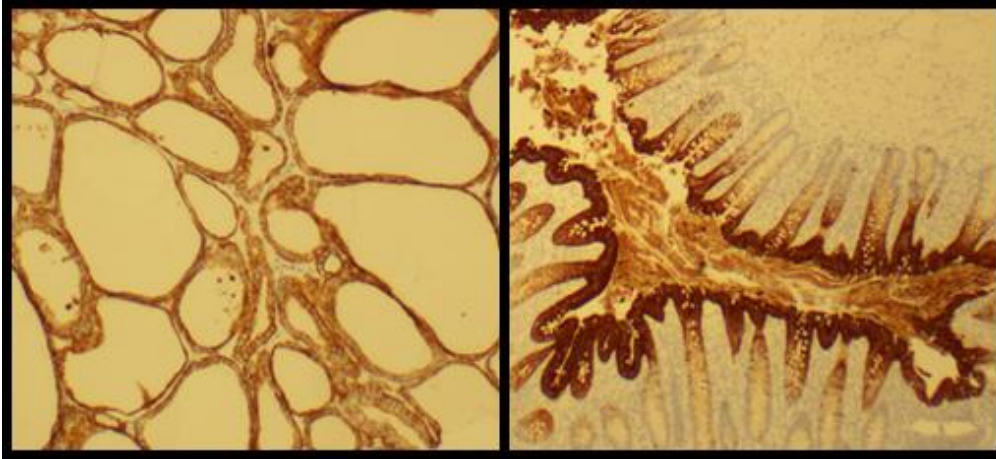




The Royal College of Pathologists

Pathology: the science behind the cure

Object 41: Immunohistochemistry



What is it?

Immunohistochemistry (IHC) is a technique used in histopathology laboratories to localise antigens in tissue sections using specific antibodies. The antigens of interest are usually substances found on particular cell types. Commercially-produced antibodies against the substance of interest bind to antigens in the tissue section. The antibody-antigen complex can be visualised in several ways, the most common being a colour change that can be seen under the microscope.

History

The first report of the use of IHC was published in 1942, although the principle had been known for several years. Since then, advances in IHC have resulted in it becoming a routine part of every histopathology lab.

Pathology

IHC is used to identify and characterise the distribution of antigens in a wide range of tissue types. Many cancers, for example, express certain antibodies according to their tissue of origin. IHC can therefore be used to differentiate between cancer that has arisen in the breast or bowel. This is extremely useful in determining treatment options as different cancers respond to different treatments. IHC can be performed manually but automated machines are now available and used by most histopathology labs.

Find out more

This [animation](#) explains how IHC works.

You can see immunohistochemistry in pathology labs – is there a laboratory open day near you? Find out on the [RCPath website](#).