OFFSPRING BIOSCIENCES
senior partners in cell and tissue imaging

Immunohistochemistry

What is it?

- Immunohistochemistry (IHC) is a classical method, first developed and employed by Albert Coons in the early 1940's, to detect antigens (e.g. proteins and peptides) in immobilized cells or tissue sections, using antibodies with specific reactivity to discrete antigens. Bound antibodies are subsequently identified, typically using chromogenic or fluorescence-based detection methods. With appropriate experimental set-ups, this method may resolve the distribution of antigens with very high resolution within sub-compartments of cells.

What can it be used for?

- Immunohistochemistry (IHC) is frequently used in projects for our clients to generate detailed information, at subcellular resolution, regarding distribution and regulation of protein/peptide-based biomarkers (for eg drug targets, pathological process or measures of effect or side effects) in sections from relevant tissues.

Our Services

- The Offspring team has extensive experience establishing and validating IHC assays and employing them to generate strong data in tissues from preclinical animal models of disease and the corresponding human disease states.
- The IHC data can be generated from snap-frozen/cryosectioned, fixed/cryosectioned and fixed/paraffin embedded/microtome-sectioned tissues.
- We are set up to perform the IHC stainings in single and multiplexed formats, using chromogenic and fluorescence-based detection system. This includes working with the extremely sensitive method of tyramide-signal amplification (TSA). TSA-assisted IHC analyses has the added benefit of allowing for simultaneous analysis of 4 or more biomarkers per tissue section and combining different primary antibodies raised in the same species without cross-talk in the detection process.
- We perform these analyses, using automated IHC staining platforms from Ventana and Biocare.